

Successionem Logicae

ἡ Μέθοδος Λογικῆς

or

On the Origin of Subatomic Species

by Means of

Logical Succession

by Bedengus

2023 Edition

As updated at the end of the year

A longer presentation of the arguments for Logical
Succession, but still not properly edited nor revised

Preface

This brief treaty has as a purpose to present a general overview on the theory of Logical Succession for the most general public; for that I have foregone every equation, as the formal proofs would not fit on the footnotes anyway.

The presentation consists of thought experiments followed by ancient and modern explanations for it, upon which they are contrasted and the validity of a scientific statement is sought – and thus show that the idea of ‘laws’ in Physics as a way to explain the world are the bane of the field, perfectly analogous to how the concept of ‘species’ once was to Biology.

This is a ‘theory of everything’, as far as we currently can¹, and familiarity with the history of Economics, the history of Biology and the history of scientific theories will greatly benefit the reader in seeing the generality of the exemplified statements.

Or perhaps it is a ‘theorem of everything’? I elicit its necessity from already admitted truths.

I hope this work brings not the ‘joy’ of agreeing with preconceived notions or the playfulness of ‘suggestive thoughts’, but that it may bring one to the deepest contemplation of reality and the lawless insecurity of it; for indeed there is no more wonderful experience than that and I wish you only the best, lovely inquisitive reader who took of your time to listen directly to me.

“The most unmerciful thing in the world might be the ability of the human mind to eventually correlate all its contents since it feels like we were never meant to travel far into these dark seas of infinity, but to forever live on our placid island of ignorance; for while the sciences go on reaching out each on its random direction it might be that one day these pieces of dissociated knowledge could fit with one another to together open up so terrifying vistas of reality that not bearing our

¹ “It has often and confidently been asserted, that man’s origin can never be known: but ignorance more frequently begets confidence than does knowledge: it is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science.”

– The Descent of Man, where so says Robert in the introduction.

Equally I do not claim to have some ‘final answer’, but simply that it encompasses everything known as far as we can infer currently; and so neither do I claim there are no improvements and corrections of it to be made on the future when we grow wiser or more knowledgeable – that is, I argue against ‘ignoramus et ignorabimus’ slightly at the harmful consequences, rather than usefulness, and mostly that exactly because of ignorance we are unable, by necessity of logic, to affirm any such ultimate discovery of some absolute unknowable.

Charles Robert Darwin, a hundred forty one years ago. Whose inhuman power of perceptions led him to collect decades of observations and experiments about all living things and the fossil they leave behind, writing thus *On the Origin of Species*; which is by far the most important work ever produced by humankind.

frightful position therein those who do not go mad with the revelation will flee from the deadly light into the peaceful safety of a new Dark Age.”²

² *Kailho I: —: I:η`*, which is in itself a paraphrase of Phillips in the opening of Call of Cthulhu.

Howard Phillips Lovecraft, eighty six years ago. Who has about nothing to do with science, but whose writing style influenced me more than any other writer; and whose quoted quote so perfectly fits our current times.

A Heated Debate

I – The Scenario

First let us imagine a cold day.

For me that is anything near twenty degrees Celsius, but what so ever might be your judgement and criteria of a cold day I believe we could readily agree that we would promptly let go of a metal pole or a metal wall plate if we touched it or supported ourselves on one while we would not mind a wooden or plastic version of it.

Perhaps flinching from a metal that was exposed to the sun is a better example while we would not mind sitting on a wooden bench, however today is overcast and when a breeze blows we shiver at how ‘cold’ it is – if it is windy some might even curse at the weather report saying that it is not possible to be the displayed temperature because ‘it is colder now than when they reported an even lower temperature’.

Many right now should be guessing the ‘answer’ on their minds saying that it is the ‘apparent temperature’; while other have cursed at that cryptic name instinctively arguing that ‘there is no such thing’ and that ‘if they are feeling cold then that is the temperature’.

Those claims can easily be undone with a short string of thoughts; for example when we consider that being exposed to the environment the metal and the wood can only be at that same ambient temperature – and thus there has to truly be their ‘true temperature’ and that ‘apparent temperature’ since we feel them at ‘different temperatures’.

So it might be said that our senses, then, are ‘wrong’, but rather I would argue that the senses are working perfectly well within their degree of accuracy so that the error instead being on our ambiguity and lack of a rigorous definition of what we are even discussing about; and instead of the hopeless fight against our senses the fault is in the prejudice of our superstitions – that is, our interpretation of the nature of what is ‘temperature’ or perhaps ‘coldness’ or ‘heat’.

We can attack the wording of ‘apparent temperature’ because we do not have some infrared sensors or any other capacity to measure how ‘hot’ something is; so that everything is to us ‘apparent temperature’ since all our direct senses tell us that which is ‘apparent’ to us.

This is a very common daily interaction that we all have with anything that is not at equilibrium with our hot-blooded bodies and so if we are motivated to do a quick search we will be told that the cause of this is the ‘rate of transmission’; that a metal having a high rate we feel its ‘coldness’

or ‘heat’ much more intensely than a piece of wood at the same temperature since that material has a ‘lower rate of transmission’ – to which simple explanation most are for an instant taken with awe in how they did not thought about it before, and so go on accepting it feeling like ‘everything makes sense now’.

To me, howbeit, I am now both cold and perplexed.

And I suggest you to be the same and not that you accept anything that ‘seems good’, that seems to fit with our casual preconceived notions, but to wonder ‘how would that other thing then cause that phenomenon?’, ‘how do they know that?’ and ‘does it answer and explain anything or does it simply move the mystery to another new and unexplained concept?’.

For example a very common line thrown around in school and memes is that ‘cold does not exist’, usually accompanied with some famous person who allegedly impressed their teachers with their wisdom by then saying ‘because cold is just the lack of heat’; somehow then the listeners do not usually just laugh and ridicule it, but many get right down offended at the idea that their interpretation of their own senses are misconceptions so that without giving any thought to understanding what is being argued and described they opposed the idea with all their hatred.

At school we had to learn both those concepts, yet it should still few like new information and a discovery to most people since very few paid any attention to our horrible forced education; and now that you have decided to become an even smaller minority in having the trouble to wonder why anything happens or rather ‘how’ – how do we know our modern theories then, and how science so greatly differ from the meaningless mnemonics of school.

So let us analyse this situation and see what we can do to understand it.

First we only had to worry about some concept of ‘coldness’ that we instinctively felt like we understood; there was an ‘object’ and there was some ‘heat energy’ or ‘cold energy’ occupying the same place as the object as a simple thing that we are affected upon touching things with one of such energies, but now because of the weird phenomenon of the metal and wood we have to juggle with ‘true temperature’ and ‘apparent temperature’ – and seeing some quick explanation online only made everything worse because now we have to deal with some intrinsic characteristic of matter called ‘rate of transmission’ that somehow interacts with the ‘heat energy’ and ‘cold energy’ in a specific way to then cause that phenomenon.

It is not useless to know how the people have been deceived, corrupted or plunged into misery; and if a grand revolution in our understanding, as individuals or as the human species, is about to come we will have a better guide to conduct us if we are familiar with those revolutions that have

preceded and paved the way for this new one – so that we may know what obstacles are left for us to be aware of and which means we have to overcome them.³

Thus let us look at some different ways of explaining it to see if that helps us.⁴

³ “Seroit-il donc inutile de savoir comment les peuples ont été trompés, corrompus, ou plongés dans la misère ?

Tout nous dit que nous touchons à l’époque d’une des grandes révolutions de l’espèce humaine. Qui peut mieux nous éclairer sur ce que nous devons en attendre ; qui peut nous offrir un guide plus sûr pour nous conduire au milieu de ses mouvemens, que le tableau des révolutions qui l’ont précédée et préparée ? [...] N’avons-nous pas besoin d’étudier dans l’histoire de l’esprit humain quels obstacles nous restent à craindre, quels moyens nous avons de les surmonter ?”

– Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain: Introduction, Sketch of a Historical Picture of the Progresses of the Human Mind: Introduction.

Marie Jean Antoine Nicolas de Caritat, two hundred and twenty nine years ago. Best known as the Marquis of Condorcet. A proponent of freedom and equality of rights to all sexes and races; as befitting one at the final years of the Age of Enlightenment. He wrote this sketch of the probable course of the development of humankind throughout the ages; and his hopes that we would continue on improving to ever better times freeing ourselves from misery not by any miracle, but by our own efforts with human ingenuity through Reason and Science.

⁴ “Non solum aquam nostri ingenii ad tantum poculum haurientes, sed accipiendo vel compilando ab aliis, potiora miscentes, ut exinde potionare possimus dulcissimum hydromellum.”

– De Vulgari Eloquentia, The Eloquence of the Masses, I:1, so that we may do not draw only of the water of our own genius, regardless of how pure and abundant it may seem to each small cup in question, but also from what can be learnt and compiled from others; mixing them better so that we may drink thenceforth of the sweet-most clear mead of truth.

Dante Alighieri, seven hundred and two years ago. A man very far from any scientific thought, and whose every ‘argument’ is a weird non-sequitur based purely on blind faith, but which it is impossible to not from time to time quote the greatest poet to ever live.

II – Interpretations Of Coldness

Aristotle says heat is heat, and cold cold.

He can feel it thus it is real to him; it is a non-physical kind of power which exists to make things hot and is inherent existent within the matter of the elements. Coldness, too, is so and something feels hot or cold when one overcome the other by there being an imbalance of the powers on the object.

For him then that is simply how the gods made the world to be; the gods who endowed them with such powers for their own reasons when they created order in the universe.

That is quite alike our normal intuition, although most today would not accept the Olympians offspring of his primordial deity to instead some other ‘Original Mover’ of their picking.

That lasted for two thousand years and at the Scientific Revolution the Novum Organum failed wholly in supplanting the old one as Francis Bacon just says heat is heat, but with ‘evidence’ since he claims Aristotle just imagined his answer with no evidence for his claims; so with the fact that when eating some seasonings he could feel the ‘heat’ on his tongue, that alcohol also felt hot when he drank, that some oils felt hotter than water to the touch at the same ambient temperature and so with other material like all animal clothes and living things – then his conclusion was that each ranked differently on how close they were to the ‘true form’ of heat created by god and partook of it in different amounts on their composition.

Night was cold even on the moonlight so it carried no heat; and he felt rather colder at night on the moonlight so it is probably cold, but ‘coldness’ he separates as another theme discussion even though it confuses him how the same water feels hot or cold depending if our hand itself is hotter or colder than it.

He also experimented with wires and ‘proved’ that the heavens spin faster the higher one go so that the Earth must be still and be the centre of the universe; and that ‘it is inadmissible to even consider the other possibility’ – and so on almost his every result are the exact same answer of Aristotle⁵, except that Aristotle was wrong in attributing that purpose of creation to his gods, blind

⁵ “Τοῦτο γὰρ οὐ συμβαίνει πάντως· οὐ γὰρ ἐάν τις μεταθῇ τὴν γῆν οὐ νῦν ἢ σελήνῃ, οἰσθήσεται τῶν μορίων ἕκαστον πρὸς αὐτήν, ἀλλ’ ὅπου περ καὶ νῦν.”

– Περί Οὐρανοῦ, On The Heavens, IV: 3, where thus Aristotle says that if the Earth was transported whither the Moon is it would not each attract each other and stay where by their mutual attraction, but as being denser the Earth would fall back to its previous place, as the centre of the universe, due to its composition of heavier elements; Francis says the same, and that if we dug a hole through the Earth something that we throw in

by his ‘idols of the theatre’⁶, because it is obvious and evident that all the others gods are made-up fairy tales except his own so that it was his god that made those inherent characteristics and power of heat for some purpose for his creation.

Some billions of people today might feel more inclined to this one, but I say they are exactly the same; and there are numberless of such acceptance of our basic instinct that ‘heat’ is just such

would not stop at the middle as some say but continue until its proper place by the density of the spinning universe, with truly no more science or method than his own imagination.

Aristotle, two thousand three hundred and forty five years ago. A name which defies introduction; a very prolific writer who went on giant texts about virtue, politics, physics, biology and religion – and in most of those his impact was so incomparably greater than all others that it defined all Western religion and sciences to this day.

⁶ “Sunt denique idola, quae immigrarunt in animos hominum ex diversis dogmatibus philosophiarum, ac etiam ex perversis legibus demonstrationum; quae idola theatri nominamus; quia quot philosophiae receptae aut inventae sunt, tot fabulas productas et actas censemus, quae mundos effecerunt fictitios et scenicos. Neque de his quae jam habentur, aut etiam de veteribus philosophiis et sectis tantum loquimur, cum complures aliae ejusmodi fabulae componi et concinnari possint; quandoquidem errorum prorsus diversorum causae sint nihilominus fere communes. Neque rursus de philosophiis universalibus tantum hoc intelligimus, sed etiam de principiis et axiomatibus compluribus scientiarum, quae ex traditione et fide et neglectu invaluerunt. Verum de singulis istis generibus idolorum, fusius et distinctius dicendum est, ut intellectui humano cautum sit.”

– Novum Organum Unus LXIV, where ‘idols of theatre’ are the preconceived beliefs; which he criticizes while he glorifies the name of ‘the true unquestionable god’.

Francis Bacon, three hundred and ninety seven years ago. One of the grand figures of the Scientific Revolution, his cheeky comments of criticism upheld the Scientific Method as the proper way to proof any assertion and to build any model of reality; and although he himself failed completely in using it, his influence on society was monumental.

“At vere rem reputanti, philosophia naturalis, post verbum Dei, certissima superstitionis medicina est; eademque probatissimum fidei alimentum. Itaque merito religioni donatur tanquam fidissima ancilla: cum altera voluntatem Dei, altera potestatem manifestet.”

– Novum Organum Unus LXXXIX, where after spending most of his time with the most severe offenses to those who are superstitious producing answers by using occult imaginary beings he justifies by saying ‘because only christianity is right, obviously beyond any doubt of course; it is even a sin to question the veracity when it is clear that my religion is the medicine against superstition as it is the only true one and all the others are demons in disguise’.

power distinct of everything of the universe because some creator design it like that – all valid and invalid in the exact same degree.

Two centuries later Dalton gives us one description right at the opening of his famous work; he starts with ‘the most probable opinion concerning the nature of the caloric...’ so that one might think he is going to use a bad popular notion to build upon and correct it, but he is actually affirming what is the explanation that he sees as the most probable of being right – and so he goes on describing ‘heat’ as a very subtle gas that repels itself while also being attracted to every other body.

That is very different from the other metaphysical explanation about some ‘inherent heat energy outside the physical world’; and he goes on to say that ‘each kind of matter has its peculiar affinity for heat’. That is not a description of our ‘transfer rate’ in question, but does touches other ‘properties’ of heat; treating it has a complex thing with many interactions and that spreads akin to a gas to everything around rather than just that magical ‘heat energy’ – also quantifying it so that the gas fills each body in accordance to its amount and that there is no ‘cold gas’ as counterpart of it, but that ‘cold’ is the seeping out of the heat-gas of a body to its surrounds.⁷

He tries to reduce ‘the magic energy that I feel’ to something more tangible and known; which is the behaviour of a gas.

It explains more of ‘how heat works’ and it is less of an invention to suppose the existence of such gas, even if never observed, than to accept the more unexplainable proposition of ‘inherent energy present on every bit of matter’.

It is also farther from our senses, but it also allows us to understand it deeper; it is able to tell us things about ‘heat’ which the others are not – as its behaviour being mathematically quantifiable in a proportion of how much is it saturated with gas, the ‘true temperature’, and how fast it will transfer to each other material, the ‘natural attraction’ of other atoms to that gas.

⁷ “The most probable opinion concerning the nature of caloric, is, that of its being an elastic fluid of great subtilty, the particles of which repel one another, but are attracted by all other bodies.

When all surrounding bodies are of one temperature, then the heat attached to them is in a quiescent state ; the absolute quantities of heat in any two bodies in this case are not equal, whether we take the bodies of equal weights or of equal bulks. Each kind of matter has its peculiar affinity for heat, by which it requires a certain portion of the fluid, in order to be in equilibrium with other bodies at a certain temperature.”

– A New System of Chemical Philosophy I.

Jonh Dalton, a hundred and seventy nine years ago. He noticed the constant proportion of elements when mixed into some product, interpreting each element as some indivisible quantified packet and thus introducing the Atomic Theory to explain Chemistry.

We have still to explain the ‘gas’, but it does tell us more about ‘heat’ than simply accepting its mysterious existence and rather than a metaphysical energy it explains different phenomena as that of our question about ‘true temperature’ just as that different objects can take a different amount of heat to get to the same proportional saturation.

But while we seem to be slowly growing more scientific and just starting to understanding deeper ‘how heat works’ he actually already answered our original question about the cold; the most powerful part of his explanation is that instead of admitting two distinct energy that somehow oppose each other for dominion over matter he explained how ‘cold energy’ does not need to exist in order to explain ‘cold’ – since the loss of the ‘heat gas’ itself would explain how things get ‘colder’ rather than an infinite accumulation of some ‘heat energy’ and ‘cold energy’ competing within every object.

Simply the answer to ‘what is heat’ explain also ‘what is cold’; the reason to separate those two things were nothing more than our preconceived notions and how we interpret our ‘senses’ – it is convenient to have both words, but such useful fiction does not reflects that there exists such mental concept as something distinct in the real world.

Still I have no praise to give Dalton and to that later Scientific Revolution which made that their accepted model since two century earlier René had already said that; and he went farther saying not only that ‘cold does not exist’, but also that heat too is not real.

He had many strokes of geniality, but let us consider how he diverged from his predecessors.

Instead of making up some special power in the universe to interpret it he considered what else was there that could perhaps explain it without any extraneous addition; we do feel ‘hot’ and ‘cold’, but are not those arguments of ‘feeling’ just their own interpretations and ideas of ‘feeling’?

Seeing that the Sun and Moon look to be the same size or that his extended fist is bigger than the Sun is no basis to prove the size of such; just like as we judge a same item brighter or darker depending solely on the background we have to compare it to – the outside stimulates our ‘senses’, but the interpretation of that information is entirely made up by us. Or very well the Kantian ‘argument’ that ‘just as the senses feel the exterior and that proves things I can feel the interior connection with my spirit that tells me that it is true’ would ‘prove’ anything anyone wanted to be true.⁸

⁸ “Ist dieses nun nicht geschehen, und kann es auch, wegen der Untauglichkeit des gemeinen Menschenverstandes zu so subtiler Spekulation, niemals erwartet werden; hat vielmehr, was das erstere betrifft, die jedem Menschen bemerkliche Anlage seiner Natur, durch das Zeitliche (als zu den Anlagen

Rather if we suppose our fist to be the exact size of the Sun or of a car, as we position it so that we observe it to be exactly so, how do we explain the change in size once we move it farther away from our eye and the increase when we move it closer to our eye? And what about the inability of others in perceiving that, or that we can enter with our fist and entire body into the car that seemed to be the same size as only such fist?

Thus that we see the argument for his sense about 'sizes' is flawed; and rather that our eyes receive information for a limited field of view so that the more a thing takes of the field of view the bigger it is to our vision – and the farther away we look the wider is the field of view so that things look smaller on the greater field than up close on a small field of view.

Of course no sane person will say that the Moon and Sun are the same size, although from old Hebrew texts to today we find those who thus argue, and the point is to then be able to justify our stance; where their 'proof' of the testament of their 'senses' break down and which, as answered, is in that the senses mean nothing but what we interpret out of it – so that some interpretation for some one case, but that disagree with all else of reality, is clearly a flawed and wrong explanation.

And how do we perceive heat or cold? Is it not some kind of pain, when it is violent, and some kind of tickling, when moderate? So that our sense of touch without any special 'organ to sense heat' is responsible for 'feeling heat'; when we simply rub our hands together we can feel sudden heat without fire when all we did was to introduce motion to the small parts that compose our hands – therefore if the small parts of any object are just moving violently and colliding with our hands we have the 'sensation of heat' without there truly being any correspondent force in nature only for that sensation.

He did not write that train of thought, but the explanation he gives is the most beautiful and precise description of the phenomenon ever written before or after him.

For now I can say that our modern science much later arrived at the same conclusion of what he already had affirmed centuries before; that 'heat' did not exist at all as that effect was truly caused just by the independent motion of the small parts of the object – yet this other kinetic theory was proposed early on the eighteenth century and had a very hard time being only rather recently, on

seiner ganzen Bestimmung unzulänglich) nie zufrieden gestellt werden zu können, die Hoffnung eines künftigen Lebens, in Ansehung des zweiten die bloße klare Darstellung der Pflichten im Gegensatze aller Ansprüche der Neigungen das Bewußtsein der Freiheit, und endlich, was das dritte anlangt, die herrliche Ordnung, Schönheit und Fürsorge, die allerwärts in der Natur hervorbricht, allein den Glauben an einen weisen und großen Welturheber."

– Kritik der reinen Vernunft, Critic of Pure Logic, Preface II.

the twentieth century, accepted because by the brute force of peering so detailedly into things we were forced to abandon the old mystical concept as there was no magical energy or gas to be seen, but only the motion of objects.

But René could not have brute-forced it by literally seeing that everyone else was wrong; by pure means of reason he arrived at such astonishing truth that most people will still refuse to even think about – that ‘heat’, as some individual and unique force, does not exist.

Our entire point here is to reason also and determinate why, even without having the visual ‘proof’, we could side with René in denying all other explanations as unfit.

III – The Original Elements

The entire modern world follows ‘western science’ and the global multicultural scientific community converged from their many native sciences to accept the compelling propositions and results of the European explanations; and while much of it was made recently on the last centuries we can trace the direct origins of our modern scientific model straight to ancient Greece, which benefactor and guide of all nations has exerted such a powerful influence throughout all ages be them happy or not – for although Greece was defeated by Rome, and Byzantium fallen, it was Greece who, both times, with its scholars conquered the world.⁹

Therefore I bring up Aristotle who compiled most of the surviving glimpses of ancient scientific theories and whose own views and model not only reigned supreme over all for two millennia well into the Scientific Revolution, but and I say also that, although less explicitly, his influence is not-less all-pervading and defines almost all thoughts still today truly as ‘the glorious philosopher to whom nature most revealed her secrets’¹⁰.

Now in all of his works I have no memory of he dealing exactly with this question of why some material might feel colder or hotter than other when both are at ambient temperature, but he did have a theory of everything which provides the model for his answer; and even if this was not the case, any single special theory on a single subject is either compatible or not with some theory of everything and is thus a hint to a greater generalization of what such greater theory would have to preserve in order to accept it.

His description of nature maintained the idea of the four elements; of fire, air, water and earth, but of course that says very little to nothing since such ideas have convergently been developed independently around the world – with many of his own critics at other models being about those

⁹ “Cette découverte fut ensuite portée dans la Grèce ; chez ce peuple qui a exercé sur les progrès de l’espèce humaine une influence si puissante et si heureuse, dont le génie lui a ouvert toutes les routes de la vérité, que la nature avoit préparé, que le sort avoit destiné pour être le bienfaiteur et le guide de toutes les nations, de tous les âges : honneur que jusqu’ici, aucun autre peuple n’a partagé.”

– Esquisse d’un Tableau Historique des Progrès de l’Esprit Humain: Troisième Époque, Sketch of a Historical Picture of the Progresses of the Human Mind: Third Epoch.

“Graecia capta ferum uictorem cepit et artes intulit agresti Latio”

– says Horatius in *Epistulae* II: 156-157.

¹⁰ “Da quello glorioso filosofo al quale la natura più aperse li suoi segreti.”

– Convivio, Banquet, III: 5.

who only accept a few or other elements, but others are to those who accept the same four and simply interpret them differently.

His interpretation was rather more complex and elegant than most; besides the four elements as physical units of matter he also advocated for four energies which would interact with the four elements to change them – so that fire was hot and dry, but could be transformed into air by being overcome with wetness for air is hot and wet while it could also be overcome by coldness at which it would become water which is cold and wet and which by being overcome by dryness would produce the cold and dry earth.

Which transformations then supposedly explain all the natural phenomena with such balance of the elements changing in accordance with such energy affecting them.

After some simple abstract examples Aristotle moves on to his many other topics, but from Vitruvius we have a long and detail exposure of how that model produced wonders as that of Roman engineering; he lists many different kinds of trees and how their wood have different properties and thus they interacted differently with the environment abeing resistant to water or weak to it, strong or soft, easy to burn or resistant to fire – all such characteristics are resumed by the explanation of how different proportions of each element lead to that.¹¹

He also mention many rocks that are useful in different parts of construction or sculpting, or even which kinds of rocks are good to be burn as lime and the effects of each additives in making concrete for different purposes, while it is also hinted to the medicinal sciences about which plants and minerals should be used for each sickness; building upon the ‘four humours’ that described human health in how the ingestion of each element affects their balance to make people healthy or not.

We might scoff at it and see as primitive thoughts before all our modern technology and knowledge, but it was a very efficient way to explain the world by correlating many phenomena

¹¹ “Quare cavendum esse videtur in moenibus conlocandis ab is regionibus quae caloribus flatus ad corpora hominum possunt spargere. namque e principiis, quae Graeci στοιχεῖα appellant, ut omnia corpora sunt composita, id est e calore et umore, terreno et aere, ita mixtionibus naturali temperatura figurantur omnium animalium in mundo generatim qualitates.”

– De Architectura Unus IV: 5, which is a much clearer and beautiful description than all roundaboutness of Aristotle.

Vitruvius, two thousand and thirty eight years ago. A Roman architect whose works survived providing us unique views of how ancient scientific theories were used by engineers to build and invent things.

within a few causes; a very good way to memorize properties of many things and try to justify, classify and quantify all the complex behaviours on a set of rules.

And for that we have the many wonders they left behind; Vitruvius even describes a rotating steam engine, which he uses to ‘prove’ that ‘wind is air in movement’ since it was not even necessary to any longer show how water when heated has its ‘coldness’ overcome with ‘heat’ and turns to air¹², and if they were not so busy with political upheavals they would have had an industrial revolution and started ‘modernity’ two thousand years ago.

The Renaissance philosophers were in shock on their great conundrum about how to keep metaphysics relevant and describe it as a ‘science’ when the ‘purely mechanical world’ of physics proved itself right by producing such amazing results causing revolutions on humankind when metaphysics had never produced anything; yet what we see from Rome shows that it is not a ‘failure to produce results’ that made their sciences ‘false’, as they are treated today, but something else that even after having produced such wonders still invalidates it as a failed description of reality.

Indeed Aristotle claimed his investigations into how the world worked to be the most noble of undertakings for the human mind, but one purely of intellectual pleasure with no advantage or result to be produced by knowing how the world works.

We will return to that soon, but for now let us see how we can extract the explanation from his system of the world; which imposing the trouble to understanding some ancient erroneous thought and convoluted ‘science’ is rather painful, even if just this quick sketch, but which the reader should bear with it since it is not only necessary as an example of the criteria of a ‘valid’ scientific description but as well as a historical knowledge necessary to compare and judge the much more vast, and convoluted, modern sciences.

¹² “Ventus autem est aeris fluens unda cum incerta motus redundantia. nascitur cum fervor offendit umorem et impetus calefactionis exprimit vim spiritus flantis. id autem verum esse ex aeolipilis aereis licet aspicere et delatentibus caeli rationibus artificiosis rerum inventionibus divinitatis exprimere veritatem. fiunt enim aeolipilae aerae cavae. hae habent punctum angustissimum quo aqua infunduntur conlocanturque ad ignem, et antequam calescant non habent ullum spiritum, simul autem fervere coeperint, efficiunt ad ignem vehementem flatum. ita scire et iudicare licet e parvo brevissimoque spectaculo de magnis et immanibus caeli ventorumque naturae rationibus.”

– De Architectura Unus VI: 2.

His example about heaviness is one of the clearest and most beautiful of the infinitely many regressions-to-infinity that Aristotle made in order to induce the necessity of his point or to arrive at a contradiction to invalidate his opponent's.¹³

He arguments on the lines that when you have two objects of different weights that difference is some third weight which if added to the lighter would equal them or if taken from the heavier would equal them; that the only thing that can make something 'heavier' or 'lighter' is some amount of 'weight'. And therefore if he has 'a body of four points' a body with more will be heavier by having a superior weight; if that body is 'five points' then subtracting the lighter from the heavier he will be left with 'one point' which is the difference in weight between them – 'and thus a point has weight'.

His point is that every point in a body will have 'weight'; dividing a body will simply make a 'lighter' body which is one with 'less weight', but there will be no remains that have 'no weight' because it is impossible for a collection of parts with 'no weight' to make a body that has 'weight'.

He rejects the Platonic 'forms' for every possible item, but keep them in a limited form; that which he cannot reduce he declares to be a 'perfect form' as an intrinsic characteristic of matter. And thus matter has 'weight' in some higher or less degree; 'weight' defined by him as how much it partakes of the perfect form of 'heaviness' and 'lightness' – for so he argues that there is 'absolute heaviness', which is the property of moving towards 'the centre', and 'absolute lightness', which is the property of moving away from 'the centre' of the Earth or of the universe which are to him the same place.

Fire thus rises since it partakes of absolute lightness; and only violence can make it move against its 'natural motion', as when 'lightning is squeezed towards the earth by the collision of clouds' – and thus the Pythagoreans had some reason when they said the stars are made of fire, as that is the lightest elements and the only that could be on that high rarefied heavens, except that they are wrong in attributing physical causes for the heavens where there are only the numinous things of the gods.

And so on; the colour of objects proving that colour is an inherent characteristics since 'many colourless things could not produce colour', the capacity to move showing that all its points are

¹³ “Ἀλλὰ μὴν οὐδ' ἐκ μὴ ἐχόντων βάρος ἔσται βάρος. Καὶ γὰρ ἐπὶ πόσων συμβήσεται τοῦτο καὶ ἐπὶ ποίων; Ἡ πῶς διοριοῦσι μὴ βουλόμενοι πλάττειν; καὶ εἰ πᾶν μείζον βάρος βάρους βάρει, συμβήσεται καὶ ἕκαστον τῶν ἀβαρῶν βάρος ἔχειν· εἰ γὰρ αἱ τέτταρες στιγμαὶ βάρος ἔχουσι, τὸ δ' ἐκ πλείονων ἢ τοδὶ βαρέος ὄντος βαρύτερον, τὸ δὲ βαρέος βαρύτερον ἀνάγκη βάρει εἶναι, ὥσπερ καὶ τὸ λευκοῦ λευκότερον λευκῷ, ἔσται τὸ μείζον μιᾷ στιγμῇ βαρύτερον, ὥστε, ἀφαιρεθέντος τοῦ ἴσου, [ὥστε] καὶ ἡ μία στιγμὴ βάρος ἔξει.”

– Περί Οὐρανοῦ, On The Heaven, III: I.

inherently moveable, the inherent characteristic of size since if it has size it cannot be made of sizeless things and the capacity of things to burn show that every element is capable of turning to fire – which would lead to an unbalance in the number of elements and thus they have to be, by necessity, convertible back into each other.

Eliciting how the world works merely from the whims of his imagination and preconceived notions of how things ‘should’ be.

With this Platonic form, although ‘limited’, or ‘inherent characteristic’ we can then describe the phenomena of ‘heat and apparent heat’ as presented above.

He does say that ‘darkness is the absence of light’ and ‘cold is the absence of heat’, however he also discusses the ‘relatives’ of comparison and advocates for some ‘absolute’ form of characteristics; so that he defends the absolute form of such ‘opposites’.

So that something feels hot or cold in accordance of how much one of such ‘powers’ overcomes the other on the object by being present in unbalanced amounts; and metal is hotter than wood because it contains more elements of earth, which when exposed to heat become elements of fire which are absolutely hot by nature – while the fire can easily be quenched back and the earth, being cold and dry by nature, has the inherent characteristic of being felt as cold as its nature.

Wood, then, is much more complex than the piece of metal and that mixed proportion of its elements make it less susceptible to that quick transformation that metal undergoes in showing the hotness or coldness in it.

This buffer element seems like a probable explanation that he could provide to explain that phenomenon.

Of course he is far from the first to invent ‘elements’ and deep into prehistory are those first notions of elements, which certainly have appeared many times converging on this general idea that things are made out of other things; and that thus there should be such basic elements that compose everything – from which no better example there is than the robust system built by Aristotle.¹⁴

¹⁴ The ‘Chinese classics’ deal mostly with moral obligations rather than any science; but mostly it is implied the ‘Five Way’ of five basic elements that in a cycle affect and transform into each other, defining the properties of wood, of remedies, of maladies, of personalities, of the heavens and its influence on politics and so on together with the idea of ‘qi’ linked to each, to the seasons, to the taste, to the organs and so on – but while it has the same magical and meaningless justification it is hard to compare the two since all of Wuxing is too mystical and vague while the Aristotelian one used by the Greeks and Romans was extremely exact as a

IV – The Criteria

That is in harmony with his description of the world; and allows us to classify different metals by their elementary composition of earth to find out the best to transmit heat or cold and on how they are affected by stresses and factors of the environment – and having such classification of materials is extremely useful for architecture and quickly communicating how the material behaves.

If it produces the same list of our explanation of ‘transmission rate’, then how is it wrong or why is it a worse scientific theory?

The initial assertion of Isaac is quite good, that we are to admit solely that which is both good and sufficient, although listing ‘good’ and ‘sufficient’ separately can be argued to be already redundant and against his own law; the second one, that thus we must assign to a same natural phenomenon the same causes, is completely redundant and extraneous after already having said the same right on the previous one – and the third, besides being once again meaninglessly repeating himself, is identical to the inherent characteristics of Aristotle and providing an ‘ignorant answer’ rather than admitting incompleteness and seeking a description.¹⁵

science and methodical on its approach. Both, however, show the seeds of science in thus having such a systematic interpretation of the world linking all phenomena to some causes which then are used to try to predict and make use of those properties, rather than that savage past where all they had was the disconnected knowledge of many accumulated factoids from empirical experience.

¹⁵ “I. Causas rerum naturalium non plures admitti debere, quam quæ et veræ sunt et earum Phænomenis explicandis sufficient.

II. Deoque effectuum naturalium ejusdem generis eadem sunt causæ.

III. Corpus omne in alterius cujuscunque generis corpus transformari posse, et qualitatum gradus omnes intermedios successive induere.”

– Philosophiæ Naturalis Principia Mathematica, Mathematical Principles of Natural Philosophy.

Isaac Newton, two hundred and ninety six years ago. Building upon the work of mathematical giants he was one of the two men who noticed the relationship of related values at higher degree; in the oldest writings we find that heavier things require more force in exact proportion to that increase in weight or that dividing the distance by time we have a certain speed, or if some speed in increasing we can divide the increase by time to know the acceleration – he, however, found out what is the relationship between that acceleration to the change in distance, a second degree relationship rather than simply multiplying one value by the other. Applying that Calculus to how things move we can then produce the Laws of Motion which furnished what is today called ‘Classical Mechanics’; and which seemed to perfectly describe, and like never before, the exact behaviour of all the universe – as the very planets which supposing some gravitation exerted upon all things based on their mass their very path through the sky could be calculated and predicted. Today we developed means to peer much closer at things and see that those perfect proportions need tweaking, but it is still the

method we describe the universe; with ‘Laws of Motion’ that are produced by some inherent Forces upon some few basic Elementary Particles.

Vitruvius, in *De Architectura Novem I*: 3-5, attributes to Plato the discovery of how having some square field one can make another square field exactly twice as big in area; since doubling the length of the sides would produce a field four times as large leaving us with a conundrum – so that we have to cut it diagonally from the corners, producing the hypotenuse from those equal sides, and make a square field with the sides measuring that hypotenuse. A while later, when reading the beautiful work of Euclid, I was inspired by his style and on the very first book I stopped reading for a moment so that I could write down a dialogue where I used his style to teach notions of Calculus by using Geometry; which I can reduce down to simple statements that can help the average reader visualize the world-changing power of that Newtonian revolution.

Let AB be a given straight line of size ‘one’.

Let AC be a perpendicular straight line of any size; that is, the point C may flow to any desired value.

If AC is also ‘one’ we can inscribe a square of area ‘one’; if it is ‘two’ we have a rectangle of area ‘two’.

If AB was ‘two’ then to an AC of ‘one’, ‘two’ and ‘five’ we would have rectangles of area ‘two’, ‘four’ and ‘ten’.

Thus we have the famous formula that AB times AC gives us the area.

Let AB be our fixed velocity and let AC be time; if our velocity is ‘five’ then at one unit of time past, two units and five units we have respectively moved five, ten and twenty-five distance units – this is what we have always been able to solve. AB times AC is the first degree relationship of a constant to a variable; the distance travelled at some fixed speed, or the velocity reached at some fixed acceleration, is the area of that rectangle.

Now let AD be a straight line perpendicular to the two others, so that if they all are ‘one’ we can inscribe from them the cube of volume ‘one’.

Let AB be our fixed acceleration, let AC be time and let AD be time too; both as flowing variables.

Let AB be ‘five’ and time be equal to ‘two’; the rectangular prism of ‘five’, ‘two’ and ‘two’ equals twenty units of volume, but when we consider the figure that is an impossibility since at time ‘one’ its volume was merely ‘five’ as it did not yet attain the height of ‘two’ to fit the ‘ten’ of half that volume – likewise as we move one unit of time forward we would have the rectangular prism of ‘five’, ‘three’ and ‘three’ which is forty-five units of volume filling the first and second unit of time all the way to ‘three’ now, what is an impossibility. Rather if we consider each time unit individually we have ‘five’ at the first time, ‘ten’ at the second and ‘fifteen’ at the third, which all sum to ‘thirty’; forming a ladder as the value of AC times AD gets larger at twice the rate that time itself increases, but as we consider half a unit of time we see that the volume could not have been entirely filled as a perfect cube as there too we find the same ladder – the closer we look the smoother the ladder is to infinitesimal increments of a figure so that rather than a fixed rectangle it forms the acute shape of a triangle. Such the first degree relation of a variable to itself.

The area of a triangle is found therefore with half of the height times width, ergo the shape formed is thus a triangular prism occupying half the volume that the perfect rectangular prism would occupy; thence we have the formula of AB times AC times AD times half – and that is the indefinite second integral of a constant.

$$\iint 10 = 10 \frac{x^2}{2}$$

We can simply call it ‘parsimony’ then; it has to be just sufficient to explain the phenomenon in question – so if two different explanations are provided we have to pick that which reduces it to less causes cutting off the extraneous elements of the other.

Before we can judge it to be ‘sufficient’ we have to define what even is an acceptable ‘description’; to which we can forgive the listing of ‘good’ and ‘sufficient’ separately and say that anything is a description, so that we just compare how ‘good’ they are – ‘good’ meaning that we can ‘understand’ the thing being described. If we understand something we can reproduce it and know how that system when closed will develop; that is that it allows us to both infer the past and elicit the future – the more accurately we can do so the more ‘good’ it is as a description.

That already excludes probabilistic approaches, which serve only as tools but not on the search for any exact Truth, but that exclusion is the very requirement of logic; for if the operation of

Thus a fixed velocity of ‘ten’ will continually move ‘ten’ at each unit of time, increasing the area of the rectangle by equal amounts at regular intervals, and a fixed acceleration of ‘one’ will continually increase its velocity by ‘one’ at each unit of time which will make it move faster the more time it passes, increasing the volume of the triangular prism by exponential amounts at regular intervals; so that at ten units of time the velocity ‘ten’ is at ‘one hundred’ and the acceleration ‘one’ at ‘fifty’, but at time ‘twenty’ they have moved the exact same distance and the velocity of the accelerating thing is double that of the fixed one – and thenceforth the disparity of the travelled distance will only grow bigger at each equal interval.

As we take the ancient notions of a force moving a thing based on how heavy it is we have then that it applied some acceleration for some time, leaving it with some velocity, and it will continue in motion forever in that direction if nothing opposes it; but here on Earth we have a gravity that is thus such constant acceleration on things, so that now as we launch a projectile we can tell how it will no longer follow that eternal path but slow down with that acceleration falling to the Earth thus tracing a parabola, or orbiting the planet, if launched parallel to it – and so on if we account for all forces we can know the competing directions of acceleration and calculate what will be that second-degree relation, that is, the path it will take.

And thus we derive, or ‘integrate’, Classical Mechanics; through the genius of Newton where then we describe all of nature as exact ‘Laws’ which are nothing more than some ‘Force’, that is some acceleration upon a mass, and quantify that ‘energy’, ‘a force acting for some travelled distance’, is maintained throughout all phenomena we observe – as collisions transferring motion from one body to another or some of that motion becoming ‘heat’ just as heated gas expands and can ‘produce motion again’ forming the theoretical basis for both steam engines as our modern internal combustion engines.

With which we can then truly compare if our theory reflects reality as the exact answers our calculations produce will be either right or not in predicting the exact behaviour of each thing; a giant leap, or rather straight out a flight from hell to heaven, in both the practical use of such convenient engineering that built the modern world as to the philosophical methodology of describing the world in the clear mathematical exactitude.

‘logic’ is taken as the very natural description of ‘a sequence of steps that by necessity produce a result’ then it is absolutely deterministic by definition – rationality and sciences are based upon nothing more than the idea of ‘cause and effect’, which denial is present only on the realm of faith and pseudo-sciences beyond reality or the validity of evidence and argumentation.

Aristotle rejected about everyone who had ever lived thus far and simply praised when some or another had an idea with which he agreed to; one of the most interesting ones of such denials is that of Anaxagoras where he says that he is wrong for ‘describing the world like a machine where things happen by necessity rather than through a higher will’¹⁶ – as such a scientist who attributed some basic elementes as the a reason for most characteristics it is clear that Aristotle treated much of the world as a sequence of cause and effect, but then he denied its generalization to everything because of his preconceived belief that while everything followed mechanical steps to completion there was the need of a ‘reason’, ‘the cause of a cause’, that endured purpose to that phenomenon.

He was quite correct in rejecting many claims, as something claimed with no evidence requires no justification to be rejected, but his reasoning in rejecting can be seen to be quite wrong on this case; it simply did not fit with his preconceived creationists ideas that the ‘arithmetic necessity’ observed in everything could extend limitless – he does tries to justify with the greatest arguments for the existence of the gods that have ever been written, but being beyond and above the very ‘logic’ of the ‘physical world’ we can only reject the baseless claims of his imagination.

Yet, while that is how we ought to proceed in life, for the purpose of this demonstration we can accept their explanations to rather than ‘valid’ or ‘invalid’ we ask ourselves which is ‘best’.

Supposing Anaxagoras to be an average Atomist then I would say he was actually right, however just saying ‘there is some indivisible particle’ and not elaborating anything further is a hard, and rather pointless, thing to accept.

Then let us say that Aristotle comes and proposes that instead of one element there are four.

That seems to be a regression and a failure of our parsimony, however we have to ask how well we know the world with each of these views. Does the Atomist explain why some woods burn better or why some plants can heal the body or our diseases?

Indeed Aristotle admits more things, but just likewise it explains more things; so his saying that ‘god created the four elements’, and initiated their motion, is a better explanation than the base of

¹⁶ “Αναξαγόρας τε γὰρ μηχανὴ χρηται τῷ νῷ πρὸς τὴν κοσμοποιίαν, καὶ ὅταν ἀπορήσῃ διὰ τίν’ αἰτίαν ἐξ ἀνάγκης ἐστί, τότε παρέλκει αὐτόν, ἐν δὲ τοῖς ἄλλοις πάντα μᾶλλον αἰτιᾶται τῶν γιγνομένων ἢ νοῦν.”

– Μεταφυσικά, Metaphysics, I.

‘god made everything’ – because on one we can understand, and therefore predict, a system better so that the other one is shown to be faulty and insufficient.

If we could make the same elemental system of Aristotle using only three elements then once again we would have found a better one; even if our understanding is unchanged it is parsimonious and reveals that one of the elements admitted was superfluous and an unreality which there was no necessity to be admitted.

The proposition that ‘coldness’ does not exist is then an improvement to our theory since it explain the same phenomena, and more actually, by simply admitting ‘heat’ instead of two things; by explaining ‘cold’ as the loss of heat we show that the concept and admittance of ‘cold’ was superfluous.

Now; that does not mean that ‘cold does not exist’. It might as well exist. But even if it does what I am saying is that we have no evidence to justify the assertion of its existence; we are forced to admit that it is not necessary for it to exist – and thus, while we cannot truly judge and prove ‘existence’ itself, we are forced to take simply that which we cannot deny. Anything more is superfluous and worse, or ‘wrong’, when compared to the more parsimonious theory that produces the same results.

The advantage of being parsimonious is very clear; since by not admitting some magic ‘cold energy’ and instead explaining it with something else we are forced to detail mechanics and steps by which that would be the case – rather than complacent acceptance of ‘having an answer’, by making up ‘forces’ and ‘elements’ for each thing, it leads to a deeper and more precise understanding of the phenomenon, and its place in relation to every other phenomenon in the world.

Therefore ‘results’ are not the measure; as a new theory cannot have yet any results and we cannot simply mindlessly try to implement every theory to judge by the ‘results’ – a theory which is superior on our criterion of ‘goodness’ provides more understanding and thus allows for the prediction and manipulation of the subject which leads to results and a negative result, some contradictory and unexplained phenomenon, is fatal to a theory, yet having produced something is not ‘proof’ that we have arrived at some perfect and unchangeable description.

On the other hand understanding is indeed the power to produce results; ‘Knowledge is power.’ is often attributed to Francis, but his actually line is much more beautiful and meaningful when he said that ‘The science and power of humans coincide into one; he who is ignorant of the cause is

destitute of the effect.’¹⁷ – and only a description of some mechanism, and not some made-up ‘law’ or ‘particle’ that magically brings the phenomenon into fruition, brings that ability to cause the effect we want.

Let us see how justifiable and good are the propositions that Dalton advanced then.

He as a chemist would take some material and process it in order to reduce it to some ‘pure’ components which were the new list of ‘elements’; water itself had been broken down into two different components and that simply updated the known ‘formula’ of every material to have that as its elements instead of ‘water’. Dalton noticed that the rate of the elements was not any random number in the mixture, but increased in exact amounts being double or so many times as some common divisor between them; some gas would be formed on a proportion of one to one and a third of carbon to oxygen while some other at one to two and two thirds – there was no middle term, but it increased only by multiples of some base amount.

That number used was exact for carbon monoxide and dioxide while Dalton was very wrong on his measurements, but the proportionality of the weight of each element was evident; it simply was not possible to make a same gas with more carbon or more oxygen because all extra added would just remain alone not reacting as the other material was depleted – the one in smaller quantity to that proportion would be the limiting reagent so that only in exact proportions they could form the product, but the exact doubling of one element could lead to no left-overs as it produced now a different compound element.

From this he inferred they were discrete packets; some smallest carbon unit weighted exactly that in proportion to oxygen and each element had such indivisible smallest unit with some weight in proportion to the others.

Very weirdly he called these molecules ‘atoms’ even though he was literally arguing that they were perfectly quantifiable and stoichiometrically divisible back into its original components.

He knew about carbon and many other elements because of the Scientific Revolution a while before where the four elements of Aristotle were being abandoned as by experiment alchemists reduced materials to their components until they no longer could; leading to a list of some dozens of elements.

¹⁷ “Scientia et potentia humana in idem coincidunt, quia ignoratio causae destituit effectum. Natura enim non nisi parendo vincitur: et quod in contemplatione instar causae est, id in operatione instar regulae est.”

– Novum Organum Unus III, where the other citation might be attributed to some alike one on his Meditations or to his secretary in Leviathan.

The exact proportion and formulas, and the name ‘molecule’, came after Dalton, when dealing with the volume rather than weight; supposing two volumes contain the same amount of particles it was seen that it took two volumes of hydrogen to one of oxygen, but also that did not make a single volume of water but two – thus that the formula was H_2O and each volume was not the atoms, but molecules of H_2 reacting with O_2 molecules.

These elements then, naturally, would be organized in lists and it was clear that they could be well organized by their increasing weight; while others decided to group elements with alike characteristics, as some kinds of metal or gases, as one related group – from that came ingenious realization that the organization was periodic, that if you make a group of alike characteristics they have some large weight difference and that the preceding elements in weight would also form a group of alike characteristics among themselves. With that was organized the table of elements; not only foreseeing that some elements were due to be discovered, but even what weight and properties they should have!

As we did discover exact those, and some more like the group of non-reactive noble gases, the atomic theory showed to be a great success in chemistry, but it obviously meant merely that there were those structures and there was no reason to follow on with the accession that they are individually created species of intelligent design; indeed the likeness and progressive mass point to some smaller structure that is responsible for such characteristics and the gradual difference in the organization of those parts lead to such ‘different elements’.

Now today we know well that is indeed the case and each ‘atom’ is itself composed of several parts; a same ‘element’ having several isotopes and the very parts of that being itself some structure composed of smaller parts. But that is pure brute force and we are here to argue why we should denounce it as wrong even before we could truly peer that such packets atoms even existed.

We could do that because just listening to his theory we can produce a better one; we accept the fact of there being, to our best measurement tools, discrete units, however that is all we need to admit – it is a quite insane and wild jump of logic to say then that such are indivisible and the building blocks of the universe. There is no necessity to admit that; it is completely extraneous and needless for the description of that which has been observed.

Aristotle, for example, could just as well argue that they are discrete because they contain some exact amount of his four elements; and that the difference in weight between each of those shew that they held a different amount of elements while the different behaviour of each shew a different proportion of the elements.

The discovery of Dalton does not prove, nor requires, it being indivisible blocks; it does not disprove or serves as argument against Aristotle – instead both are needless and extraneous things proposed beyond any evidence or necessity.

Far from being forced to admit such a conclusion we are forced to deny it as a meaningless and unjustified addition.

There was never any reason to propose that there could not exist anything smaller or any component to his packet; no necessity for them to be ‘atoms’.

But we do can sympathize and understand why he was so hasty taking such unscientific jump; he could not differentiate two things so he did the absolute absurd and said they were indivisible and identical in every way – he followed Ifaac’s third rule and postulated it as some fundamental part of the universe, a thing made by god to be that way and which needed no further explanation then.

He has much grosser errors by such justification, however, since while he spends a long time listing all combinations and characteristics of the pure materials that he found he also expends a good portion of his work arguing for some thermodynamic law; that materials when filled with the heat-gas have to expand in an exact proportion to their density – and his justification for why that is the case and that there is a ‘thermodynamic law’ controlling all heat-related phenomena is a really enlightening one in explaining why he proposed unnecessary absurdities.

He says that ‘heat is a very important agent in nature’ and so ‘it cannot be doubt that is must be subject to general laws’.¹⁸ His reason is identical to that of Aristotle; that the natural phenomena come from some higher will that made them for a purpose – and thus as we watch the mechanical behaviour we can find the equation that god wrote for that ‘important agent in nature’.

The second part of the same paragraph is even funny because he says that it is an insufficiently comprehensive view that makes one not give a reason and description of something; like his very postulation of ‘atomic’ things and search for a magic ‘law’ which would distinguished heat from all gas and matter back into the realm of a mysterious energy from god.

The only reason to call them atomic, and for seeking some ‘law’ on the form of an equation that could perfectly describe the observed behaviour, was his own preconceived notions; or rather as it is very clear the preconceived notions imparted into him and which have ruled over physics since our oldest registers.

We can just brute force and use our current knowledge to say simply that ‘he was wrong’, but that is extremely trivial and far from the question; because René was right – and that was many

¹⁸ “Heat is a very important agent in nature ; it cannot be doubted that so active a principle must be subject to general laws. If the phenomena indicate otherwise, it is because we do not take a sufficiently comprehensive view of them.”

centuries even before we had that answer by brute force. Could we justify siding with him back then as a contemporaneous of Bacon? And could we deny later wrong theories, as from Ifaac and Dalton?

How did he know? How could we judge who was right and the best argument before we had the exact knowledge by literally seeing it?

That is the entire point of this heated debate on heat; because today we have the same problem many times over and before we actually have a confirmation and answer by brute force we are plagued with all these invalid 'theories' – which are 'new theories' are just a repetition of those same past mistakes.

We wander lost in the dark with no guidance when we accepted the magic 'explanation' that 'this is just how it is' and 'god made it like that'; and no brute force will prevent them from, after being shown to be so mindlessly wrong, repeating 'now this next one is the final and most basic elementary particle of the universe'.

Let us see how justifiable was the claims of René; and if we could at the time accept them.

V – The Method

If all ideas were equally valid then all science and art would cease to exist since none could be more right or wrong than any other; the discrepancy of those ideas with the unwavering reality before us is the judge of how ‘correct’, how real, they are – so that we do not choose in ‘what to believe’, picking that which is most convenient to our preconceived notions, but rather than ‘having an answer’ we are simply forced to admit one thing over another.

Due to the natural attachment of man to the opinions received in his infancy, to the customs of his country, to the aversion that ignorance produces against any kind of novelty, to the overwhelming work in pursuit of a new view which mere prospect crushes the yet feeble spark of curiosity and finally to the dreadful empire which superstition holds upon the mind; indeed it can be very hard to let go that which was indoctrinated into us our entire lives and to jump out into the unknown of admitting uncertainty and seeing how unfamiliar the world can be away from where we have always lived – to those brave enough to really question their beliefs and fairly judge this work I will say that no matter how bitter the medicine the disease is even more, and often on the course of our lives necessity, and not delight, is what compel us.¹⁹

¹⁹ “L’attachement naturel de l’homme aux opinions reçues dès l’enfance, et aux usages de leur pays, l’aversion naturelle de l’ignorance pour toute espèce de nouveauté, la paresse de corps, et sur-tout celle d’esprit, qui l’emportoient sur la curiosité si foible encore, l’empire que la superstition exerçoit déjà sur ces premières sociétés, telles ont été les principales causes de ce phénomène.”

– Esquisse d’un Tableau Historique des Progrès de l’Esprit Humain: Deuxième Époque, Sketch of a Historical Picture of the Progresses of the Human Mind: Second Epoch.

“Tant' è amara che poco è più morte;
ma per trattar del ben ch'i' vi trovai,
dirò de l'altre cose ch'i' v'ho scorte.

Io non so ben ridir com' i' v'intrai,
tant' era pien di sonno a quel punto
che la verace via abbandonai.”
– Inferno I: 7-12.

“rispose: «Ben è vivo, e sì soletto
mostrar li mi convien la valle buia;
necessità 'l ci 'nduce, e non diletto.

Tal si parti da cantare alleluia
che mi commise quest' officio novo:

We are not born with knowledge, and when antiquity fails to provide us with a correct picture of reality we can only abandon it as fantasies as we look for the truth²⁰; to which explanation of ‘fire’ René has given us something amid the lines that:

“Without any ‘elementary essence of fire’ or special ‘energy of heat’ when a piece of wood burns it is already visible to the eyes how are moved the small parts of such material where the subtlest are as if transformed into fire, air and smoke while the grossest are left behind as ashes.

non è ladron, né io anima fuia.”
- Inferno XII: 85-90.

“Und die Pflicht der Philosophie war: das Blendwerk, das aus Mißdeutung entsprang, aufzuheben, sollte auch noch soviel gepriesener und beliebter Wahn dabei zu nichte gehen.”

- Kritik der reinen Vernunft, Critic of Pure Logic, Preface I, where he says that ‘it is the duty of philosophy to destroy the misconceptions begotten from wrong ideas independently of how much false hopes and expectancies be ruined’; and as he is saying something good for once I can complete that ‘because those empty promises would not be fulfilled anyway.’ as indeed the grand picture of History presents us with all gradations and shades of the nuanced debasement and corruption which superstition, by the destruction of our reasoning faculties, can reduce the human species to.

²⁰ “子曰：「我非生而知之者，好古，敏以求之者也。」”

- 論語: 學而, Lunyu: Shu Er, III, where Qiu says he was not born with knowledge, but that it is in antiquity that he seeks it; a sentiment shared universally by cultists, as so mightily by Plato, with his Politeia erected solely for such a purpose, and inherited by the Roman plagiarists trying to save their incoherent fantasies by waging war against all progress by picturing it a vile thing straying farther from the gods if one dared to have his own thoughts instead of ‘what was everywhere, always, believed by all’.

Qiu Kong, two thousand five hundred and two years ago. Better known as ‘Confucius’. The grand Chinese philosopher of morality by following the ancient traditions; extremely influential within the Middle Kingdom, but a grand detriment to humankind rather than any contribution to the world.

“Quod ubique, quod semper, quod ab omnibus creditum est”.
- ADVERSUS PROFANAS OMNIUM NOVITATES II.

“Διόνυσος
πᾶς ἀναγορεύει βαρβάρων τὰδ’ ὄργια.

Πενθεύς
φρονοῦσι γὰρ κάκιον Ἑλλήνων πολὺ.”

- Βάκχαι, Bacchae, 482-483, to which Euripides had so beautifully answer; one says ‘all barbarians perform such orgies’ and he says ‘because they are much inferior in thought than the Hellenics’.

But such imaginers can put the ‘fire’ on the wood, put the ‘heat’ on the wood and give to it the capacity of being ‘burnt’ as much as it pleases them that no alteration or change would happen only by possessing such inherent characteristics; it is necessary the addition of such movement of its parts that dislodge it from its neighbours and separate them – and to the contrary abstain the thought of ‘fire’, ‘heat’ and ‘burning’ and nothing will be changed on the phenomenon provided solely that there is such power that violently move the particles.

Nothing more is necessary for the description of what we observe on the phenomenon of combustion and all collective movement arbitrarily called ‘heat’.

For in order for a body to move another it itself has to be in movement so that the body of ‘fire’ which acts upon the wood is composed of small parts which move themselves independently one of the other in such very prompt and very violent motion; since they would not have the strength that they have to act upon other bodies if they had not the velocity to compensate for their lack of grandness – while the fact that they are generally going upwards reveals no other reason that is not the greater resistance offered at every other direction, and thus the set creates a single effect without any ‘natural tendency of movement’ or special universal law designed just for such specific species of phenomenon as each act by itself following the path made less difficult by the placement of the surrounding bodies exerting force upon it.

It is not necessary for the ‘fire’ any other characteristic besides such motion for the phenomenon which we observe to be created; and the sensation of heat is nothing more than the sensation of pain, when it is violent, or ticking, when it is moderate – it is the action of myriads of small particles colliding and generating the sensation on the small parts of our hand or body, not differently of how without any fire just by rubbing any random thing we create the same agitated motion perceived as ‘heat’.²¹

²¹ “E ne connois au monde que deux fortes de corps, dans lesquels la Lumiere se treuve, sçavoir les Astres & la Flâme, ou le Feu. Et parce que les Astres semblent sans doute vn peu plus éloignez de la connoissance des hommes, je tâcheray premierement d’expliquer ce que je remarque touchant la Flâme.

Lors qu’elle brûle du bois ou quelqu’autre semblable matiere, nous pouvons voir à l’œil qu’elle remuë les petites parties de ce bois & les separe l’une de l’autre, transformant ainfi les plus subtiles en feu, en air & en fumée, & laissant les plus grossieres pour les cendres. Qu’un autre donc imagine s’il veut en ce bois, la forme du feu, la qualité de la chaleur, & l’action qui le brûle, comme des choses toutes diverses ; pour moy qui crains de me tromper, si j’y suppose quelque chose de plus, que ce que je vois necessairement y devoir estre ; je me contente d’y concevoir le mouvement de ces parties. Car mettez-y du feu, mettez-y de la chaleur, & faites qu’il brûle tant qu’il vous plaira, si vous ne supposez point avec cela qu’il y ait aucune de ses parties qui se remuë, ni qui se détache de ses voisines, je ne me saurois imaginer qu’il reçoive aucune alteration ni aucun

changement. Et au contraire ôtez-en le feu, ôtez-en la chaleur, empêchez qu'il ne brûle, pourveu seulement que vous m'accordiez qu'il y a quelque puissance, qui remuë violemment les plus subtiles de ses parties, & les separe des plus grossieres, je trouve que cela seul pourra faire en luy tous les mêmes changemens qu'on experimente, quand il brûle.

Or parce qu'il ne semble pas possible de concevoir qu'un corps en puisse remuer un autre, si ce n'est en se remuant aussi soy-mesme. Je conclus de cecy, que le corps de la flamme qui agit contre le bois, est composé de petites parties, qui se remuent separément l'une de l'autre, d'un mouvement tres-prompt & tres-violant ; & qui se remuant en cette sorte, poussent & remuent avec soy les parties des corps qu'elles touchent, & qui ne leur font point trop de resistance. Je dis que les parties se remuent separément l'une de l'autre : car encore que souvent elles s'accordent & conspirent plusieurs ensemble pour faire un même effet, nous voyons toutesfois que chacune d'elles agit en son particulier, contre les corps qu'elles touchent. Je dis aussi que leur mouvement est tres-prompt & tres-violant : car étant si petites qu'on ne les peut pas mêmes distinguer par la veüe, elles n'auroient pas tant de force qu'elles ont pour agir contre les autres corps, si la promptitude de leur mouvement ne recompensoit le deffaut de leur grandeur.

Je n'ajoute point de quel costé chacune se remuë : car si vous considerez que comme j'ay assez expliqué en la Dioptrique, la puissance de se mouvoir, & celle qui determine de quel costé le mouvement se doit faire, sont deux choses toutes diverses, & qui peuvent estre l'une sans l'autre ; vous jugerez aisément que chacune se remuë en la façon qui luy est renduë moins difficile, par la disposition des corps qui l'environnent ; & que dans la mesme flamme il peut y auoir des parties qui aillent en haut, & d'autres en bas, tout droit & en rond, & de tous costez, sans que cela change rien de sa nature. En sorte que si vous les voyez tendre en haut presque toutes, il ne faut point penser que ce soit pour autre raison, sinon pource que les autres corps qui les touchent, se trouvent presque toujours disposez, à leur faire plus de resistance de tous les autres costez. Mais apres avoir reconnu que les parties de la flamme se remuent en cette sorte, & qu'il suffit de concevoir ses mouvemens, pour comprendre comment elle a la puissance de consumer le bois & de brûler ; examinons, je vous prie, si le même ne suffiroit point aussi, pour nous faire comprendre comment elle nous chauffe, & comment elle nous eclaire. Car si cela se trouve, il ne sera point necessaire qu'il y ait en elle aucune autre qualité, & nous pourrons dire que ce mouvement seul est selon ses differens effets appellé, tantost Chaleur, & tantost Lumiere. Or pour ce qui est de la Chaleur, le sentiment que nous en avons, peut ce me semble, estre pris pour une espeece de douleur, quand il est violent, & quelquefois pour une espeece de chatouillement, quand il est moderé.

Et comme nous avons déjà dit, qu'il n'y a rien hors de nôtre pensée, qui soit semblable aux idées que nous concevons du chatouillement & de la douleur : Nous pouvons bien croire aussi, qu'il n'y a rien qui soit semblable à celle que nous concevons de la Chaleur ; mais que tout ce qui peut remuer diversement les petites parties de nos mains, peut exciter en nous ce sentiment. Mêmes plusieurs experiences favorisent cette opinion. Car en se frottant seulement les mains, on les chauffe : & tout autre corps peut aussi être chauffé, sans être mis aupres du feu, pourveu seulement qu'il soit agité & ébranlé, en telle sorte, que plusieurs de ses petites parties se remuent, & puissent remuer avec soy celles de nos mains.

Pour ce qui est de la Lumière, on peut bien aussi concevoir, que le même mouvement qui est dans la flamme suffit pour nous la faire sentir. Mais parce que c'est en ceci que consiste la principale partie de mon dessein, je veux tâcher de l'expliquer plus au long, & reprendre mon Discours de plus haut."

- *Traité du Monde et de la Lumière II*, which most perfect and exact description of the macroscopic effect of 'thermodynamic' supersedes in beauty and precision everything ever written before or on the three centuries after.

René Descartes, three hundred and seventy three years ago. He 'fused geometry and algebra'; putting all figures in a single plane to which he could use some same ruler to measure and compare them all, what paved the way to the creation of Calculus decades later. He thus used mathematics in his descriptions of reality and presented such novel ideas of the world as some giant exact mechanism; and from that he followed using reasoning to suppose some possible mechanics with which the planets and phenomena could 'probably' have worked.

Bold claims which force me to invoke here the holy man who rules over writing himself; whose literary skills of composition no other mortal could yet approach.

"Πρῶτον μὲν οὖν ἡ πῦρ θερμὸν λέγομεν, ἴδωμεν ὅδε σκοποῦντες, τὴν διάκρισιν καὶ τομὴν αὐτοῦ περὶ τὸ σῶμα ἡμῶν γιγνομένην ἐννοηθέντες. ὅτι μὲν γὰρ ὅξυ τι τὸ πάθος, πάντες σχεδὸν αἰσθανόμεθα: τὴν δὲ λεπτότητα τῶν πλευρῶν καὶ γωνιῶν ὅξύτητα τῶν τε μορίων σμικρότητα καὶ τῆς φορᾶς τὸ τάχος, οἷς πᾶσι σφοδρὸν ὄν καὶ τομὴν ὀξέως τὸ προστυχὸν αἰεὶ τέμνει, λογιστέον ἀναμνησκομένοις τὴν τοῦ σχήματος αὐτοῦ γένεσιν, ὅτι μάλιστα ἐκεῖνη καὶ οὐκ ἄλλη φύσις διακρίνουσα ἡμῶν κατὰ σμικρά τε τὰ σώματα κερματίζουσα τοῦτο ὃ νῦν θερμὸν λέγομεν εἰκότως τὸ πάθημα καὶ τοῦνομα παρέσχευ."

- *Τίμαιος*, *Timaeus*, 61δ-62α, where truly the elegance is the closest we have of a proof of divine inspiration; but whose truth and precision are as much of a joke as his belief on that last argument that 'thermos' truly came from 'keiro' e 'kermatizo' of 'cutting up' as a proof that the ancients, and the gods themselves who had intelligently designed the language like that, left those clues for our instruction that the element of fire had intrinsic 'sharpness', and was a 'pyramid', to it that allowed it to so cut things into miniscule pieces and have such violent motion that make heat feel like some kind of tiny pain.

Aristocles, two thousand three hundred and seventy one years ago. Better known as 'the wide one', or '**Plato**'. His philosophy goes much beyond morality; rather setting the path of an unified theory where everything in nature could be explained from a single model of how reality works. The mighty influence of Aristotle comes much from his learning the Reasoning of Plato; and besides that indirect influence he provides us with the most perfect model to question, and understand, the logical validity of any assertion - that is, his system is extremely detailed and perfectly built from some simple assumptions so that by comparing any other theory with his we can see flaws where they overlap and imitate his ancient paralogism.

And while Euripides was indeed right that 'to Persuasion there is no sanctuary but the eloquence of reasoning', I must still challenge the myriad of geniuses that came before me; and even Plato must go down if we are to take hold of the cornucopia of Truth - not by learning new factoids that make him outdated and meaningless, but my acquiring the soundness of judgement to take apart the argument and check the validity of every claim.

Thus he describes the phenomena of heat, fire and all things related as a same process; it reduces all of them to something already admitted, that is ‘movement’ – because if that is admitted then it is not necessary, and thus unjustifiable, to admit anything else in order to explain all these others.

It was not necessary to admit the ‘absolute lightness’ of Aristotle to explain ‘why fire goes up’ or to admit that things have a ‘natural motion’ they simply move by themselves and a ‘necessary motion’ of when ‘something compels them to act against their natural motion’, but it only moves or stop where it is shoved to.

As Bacon noticed things do not always gave his supposed ‘cold energy’ and ‘hot energy’, but it was dependant to what it touched; and thus if our hand touches something ‘cold’ it is because the motion of those particles are less forceful than those of our hands so that the particles of our hand slow down transmitting motion to the object, while if it is hot then it is the particles of our hand receiving motion from those collisions with the particles of the object – those surface particle equilibrate at some forcefulness, then, and how fast the object can unbalance it so that we feel cold or hot again, the metal and the wood, is dependent on the structure of that object in how its particles are organized to efficiently transfer that motion around the object or not.

Thus also we understand how on still days we achieve equilibrium with the air around after transferring some energy to it making it faster, or receiving some slowing that air down, but on windy days it feels hotter or colder at the same temperature since that air that took away motion from our skin, or that gave it, is shoved away so that a fresh batch arrives to repeat the processes all over again; that is the main effect that blowing on our coffee has since it will bring fresh air and more quickly conduct the heat, the motion of those molecules on the liquid, away – much more useful, then, it is to understand how the structure of the air itself works so that fast-moving air molecules can keep more particulates floating on it, like an active kid playing of not letting a balloon or ball fall to the ground, just as colder air holds much less molecules, as a sluggish kid who lets the balloon fall easily.

That is useful to the extreme since we have this amazing mechanism of sweating from our naked skin; so superior than the insulating layer of fur because of the ‘evaporative cooling’ since the molecules of water are held together by their intermolecular forces and as soon as any it moving violently enough it will break free from that cohesion and float free as a gas – only the most

“Εὐρυπίδης

”οὐκ ἔστι Πειθοῦς ἱερὸν ἄλλο πλὴν λόγος.”

– Βάτραχοι, Frogs, although Aristophanes uses ‘logos’ as ‘the capacity to trick using fallacious logic’, and the actual context where Euripides put those words into some character is lost in Antigone.

violent evaporating away so that the slowest are those left behind making that liquid thus with less average energy, therefore ‘colder’.

What happens, then, if the climate is not only hot, but the air is damp by its saturation of humidity? We sweat, but our sweat fail to evaporate or condenses back after doing so; a combination that forms that dangerous atmospheric structure which leaves us unable to dissipate that overbearing heat and leads to the failure of our internal processes which are very fragile chemical reactions that require exact environments in both chemical gradients and ‘temperature’ – and so on so powerful and useful insights into how the world works, and how to build amazing machines for our convenience or protect ourselves from harm, are gained from the exact understanding of processes.

Dalton, much later after the matter was so beautifully answered, still engaged on the worthless pursuit of his ‘law’ that would explain that behaviour of heat and invented new magic objects to justify it; since with no cares to explaining any process he just sought ‘the law god made to rule over this phenomenon’. He even made up new particles saying that ‘the rays of light cannot carry heat and so the sun must also produce caloric rays’ and that such would not interact with the transparent atmosphere and heat it up, but only with the opaque things on the ground; a common process to add if-else statements on their ‘laws of nature’ that ‘only apply to some things’ in order to hold on to their preconceive magical explanation.

At nearly the same time as René there are the logical statements of Hobbes that ‘the senses in all cases are caused by the pressure, that is, by the motion, of externall things upon our Eyes, Eares, and other organs thereunto ordained’; saying that there was no necessity for what the universities taught about philosophical texts and the teachings of Aristotle saying that for the cause of vision the object sent a ray of sight when it was a thing with the property of being seen and we with the capacity of sight absorbed that ray – that is often used nowadays to say that Aristotle was right when contrasted with Plato who said that the eyes shoot rays and scanned things, but both are very wrong as he is not talking about light bouncing off as Hobbes go on saying that ‘for the cause of understanding too there is no need for the object to have the capacity to be understood and to send then rays of understanding that we solely possess the capacity of absorbing them to make us understand’.²²

²² “So that Sense in all cases, is nothing els but originall fancy, caused (as I have said) by the pressure, that is, by the motion, of externall things upon our Eyes, Eares, and other organs thereunto ordained.

But the Philosophy-schooles, through all the Universities of Christendome, grounded upon certain Texts of Aristotle, teach another doctrine; and say, For the cause of Vision, that the thing seen, sendeth forth on every side a visible species, (in English) a visible shew, apparition, or aspect, or a being seen; the receiving whereof into the Eye, is Seeing. And for the cause of Hearing, that the thing heard, sendeth forth an Audible species,

For every possible characteristic, as said, Aristotle adopted the Platonic forms and that objects needed the capacity to emit such rays, ‘the capacity to be seen’, just as we needed the capacity to absorb them in order to perceive anything, ‘the capacity to see’; ‘energy carriers’ of some intrinsic magical property fundamental to things was his explanation to everything – which these two logicians clearly show to be a superfluous and meaningless addition to the admittance of motion, and which today we have brute forced the answer by seeing exactly that indeed the binding of molecules or the mere pressure of other less precise things provoke equally ‘mechanical’ processes on the wiring of our brains evoking ‘senses’.

Indeed they have not described the photoreceptors of the eyes or our nervous system, but that would be a question of exact knowledge; they reduced to the minimum they could admit and provided the exact path for new discoveries to be made – a general description that begets inquiry and discoveries rather than an ultimate ‘answer’ that provides comfortable complacency in ignorance.

What is ‘motion’, then? That is truly beyond the original question now; because we already admitted it as part of the world beforehand and we already not knew what was motion – so we truly and completely solved the question of ‘heat’ because we have reasoned that it is simply motion, and the answer to what is the phenomenon of motion solves both questions.

It was never needed to separate them; such separation of ‘many laws’ and ‘elementary particles’ and ‘many forces’ was purely their preconceived creationist notion that everything was ‘for a cause’ and designed individually by the hand of such creator – the ‘organized phenomenon’ that shapes them all to ‘follow the same path’ is merely the presence of an equal selective pressure and once these factors that produce that behaviour are changed, as by sitting near the bonfire, a new shape, behaviour or form is produced, as the smoke upon your face rather than straight up.

that is, an Audible aspect, or Audible being seen; which entring at the Eare, maketh Hearing. Nay for the cause of Understanding also, they say the thing Understood sendeth forth an intelligible species, that is, an intelligible being seen; which comming into the Understanding, makes us Understand.”

– *Leviathan I: I*, upon which Aristotle has a discussion about those who say that the ‘soul’ is then composed of all elements for it to be able to thus perceive all things; while he himself take the Platonic side that ‘soul’ is unique and divine so that it thus can recognize every such things by having inherent knowledge within itself about those objects of creation.

Thomas Hobbes, three hundred forty four years ago. Presenting nature as following some exact laws he argues that rather than accommodating us it is a struggle against such laws; setting thus the first seeds of our modern political philosophies, which in turn so greatly influenced our natural philosophies as concepts of Economy of Nature diffused into every field.

Thus they are completely unjustified and need no reason to be rejected; it was factual the discrete packets seen by Dalton, but a giant leap of logic to have any claim that it was ‘indivisible’ or ‘the most fundamental particle of nature’ – such baseless assertion that comes from his beliefs are as anti-scientific as it can be so that it is not even a matter of debate the validity of such.

As easily seen the same ideas and justification permeates the entire work of Aristotle; and it has been so through all of sciences the crawl of progress against the preconceived doctrines of ‘species’ made as indivisible units as the intelligent design of some god.

We might as well be wrong and there might truly exist, for example, the four Aristotelian elements actually serving as the building block of all our currently known ‘elementary particles’; the brute force of experiment might show that and then we would be forced to admit the reality of it – but with our limited knowledge where we must make the parsimonious choice of what is justifiable to admit we have no option but to deny them in favour of the simpler and less inventive theory.

Isaac Newton was a grand engineer, just as Rome produced great things, but his ‘laws’ are the repeated argument of Aristotle, now quantified, and he felt the need to add on the subsequent versions of his *Principia* the *Scholium Generale* saying how such beautiful and mathematically elegant laws were the gift of god designing the world for us and a show of the grandiosity of his god.

As great as his contributions were for engineering, just as great of a harm he did unto all Natural Philosophy and rational thought; he made a field where the sole pursuit was to ‘discover the formula that god used to make this phenomenon’ – each one being the independent work of creation as a unique species and law which requires no further explaining, but simply quantify the laws made by god for us.²⁵

²⁵ On that very quote from René he mentions that to ‘compensate for its smallness it must be going very fast’; phraseology that Plato himself uses since it has always been evident to all that some ‘force’ is equivalent to both the acceleration an object as suffered and its mass – while Hobbes too, literally right after that quote on the opening of *Leviathan* I: II, says that ‘that a thing will lie still unless something stirs it is a truth that no man doubts of, but that when a thing is in motion it will eternally be in motion is not so easily assented to’. Both are methodically quoted from the *Principia* as if Isaac had been ‘the one who set the system of the world’ even when both of those paragraphs had been written before he was even born; his contributions were not on natural philosophy providing any explanation or theory but of an engineering kind providing precise measurement of the phenomena without any new model for it.

“Tis unconceivable that inanimate brute matter should (without the mediation of something else which is not material) operate upon & affect other matter without mutual contact; as it must if gravitation in the sense of

And that still describes our whole field of modern Physics.

Epicurus be essential & inherent in it. And this is one reason why I desired you would not ascribe innate gravity to me. That gravity should be innate inherent & essential to matter so that one body may act upon another at a distance through a vacuum without the mediation of any thing else by & through which their action or force {may} be conveyed from one to another is to me so great an absurdity that I beleive no man who has in philosophical matters any competent faculty of thinking can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws, but whether this agent be material or immaterial is a question I have left to the consideration of my readers."

- says his famous letter to Richard Bentley; where he makes it obvious that he did not made the interpretation that everyone took of it has some 'innate power', but that he simply measured it and gave absolutely no explanation of theory of any mechanisms. He simply observed and quantified the phenomenon into the simplest equation he could; and attributed it all to that plagiarism of Platonic ideals that he called his god.

Individual Acts Of Creation

I - If !Fire Then !Thermodynamics

After our cold outing we arrive home and promptly turn on the stove to make some cappuccino.

We take a 'fervedor' boiler; it is not like a kettle, but it looks more like a metal beaker with a handle - putting the milk in and it on the fire we watch the mesmerizing process of boiling.

Willingly or not we are forced back into the discussion for we have to admit one description or the other; ignorance and negligence are no longer possible after we started the process of reasoning - we can no longer accept some 'essence of fire' that moves upward or some 'heat energy gas' with some laws made by god 'because heat is important to us'.

We must seek an exact and real description.

From experience we can anticipate the "dangerous climax where the proteinaceous foam expands porously due to the vaporous exhalations breaking the liquid hold of the agitated hydroxides even before the famous one hundred degrees, but not even Pasteur lived at sea level; which chaotic motion was transferred by the oxidation of the hydrocarbon into the famous products of dioxides and dihydroxides which have less 'mass' than the original ingredients and thus such defect is absorbed by the air being thrown so violently that emitting visible photons, the force that they lose on the imperfect transferences, they collide with the 'stainless' steel of the pan - fitting receptacle of this iron age which with its powerful metallic bonds promptly allow the violent motion of its tomic atoms without letting them go of their communal pools of electrons and therefore finally colliding with the milk above, and on the side, causing the generalized disturbance on its molecules which impelled to every direction at high velocity they bombard the proteins which are unable to keep their delicate structure of folded forms and being denatured they are useless to keep the vital processes of the animalcules on the milk."²¹

I am tempted to just go on and describe as thus instead of suffering a terrible intestinal infection at the direct harm or the competing of the foreign forms with my symbiotic microbiota I will drink with impunity the nutritive cadaver of the dead bacteria; or how just like it a long series of continuous chemical reactions eventually produced also, like every other biological structure, the genes which allow me to obtain the main nutrition by allowing the continuous production of the enzyme to hydrolyse the disaccharide into its two simple sugar rings - or the effects of mixing the

²¹ *Kaiho I: 二; IV: κε.*

hydrophobic chocolate in or the sublime homeostasis and all other ceaseless vital pathways of the metabolism dealing with such influx of new perturbations into the body.

You can enjoy my long-winded artistic descriptions of reality in Kaiho; for now let us focus on the discussion at hand – after, of course, we leave the boiler on the sink to soak since we know that far from being still that water at room temperature is almost at three hundred Kelvin and so it brutally collides with each other and everything else atomizing the softer muck and organizing them apart on its partially charged matrix, but we do have to guard against the hydrolic jump on the spoon we left inside it as we fill it with water.

There was no ‘thermodynamic law’ since there exist no ‘heat energy’²⁵ to even follow such law; such magic terms do not provide ‘understanding’ of what is happening and thus is not even a valid, or ‘good’, explanation – and as we saw they are completely unnecessary when the mere air colliding with the metal which collided with the milk describes the entire process with no space for any extraneous ‘heat energy’.

Just as no ‘law of hydrodynamics’ made the milk convex and flow that way for some predefined behaviour inherent in it or on the universe; the collective behaviour has already been quite well described by René with “While the fact that they are generally going upwards reveals no other reason that is not the greater resistance offered at every other direction, and thus the set creates a single effect without any ‘natural tendency of movement’ or special universal law designed just for such specific species of phenomenon as each act by itself following the path made less difficult by the placement of the surrounding bodies exerting force upon it.” – that is, facing similar pressures of its environment they were selected to behave the same, which collective behaviour forms that structure.

²⁵ “Temperature’ is how we nowadays name this arbitrary macroscopic phenomenon, as if it was a ‘property’ and not a phenomenon, since we know there exist no individual ‘heat energy’, but merely that collective motion which we can for convenience describe as a coherent process; and ‘heat’ became simply the name of that transfer of motion from one thing to another. There is no reason to follow that random split, however, and I will keep using the term on its full meaning merely that perceived energy ‘within objects’; just as I will use the old imaginative term of ‘heat energy’, the illusion brought by ‘thermal energy’ being no better, as it is my point to compare that unnecessary invention to all these unnecessary ‘elemental particles’ and ‘laws’ today interpreted as unique fundamental ‘forces’ of magic rather than as some natural phenomenon which needs explanation.

Furthermore you may notice I use solely ‘motion’; the thing that was added or changed in the object that now makes it different from when it was still – I do not thus make the arbitrary distinction of concepts of ‘momentum’ and ‘kinetic energy’, which silly ‘vis viva’ is an awful thing that by necessity goes down into the mysticism of ‘potential energy’ that is just disgusting. Mere ‘motion’, and the description of it that will come later, suffice; the other concepts being not only unnecessary, but misleading fantasies.

Such ‘laws’, although hydrodynamics is not even called that anymore²⁶, are mere tools for engineering and not a description of reality; this long route to say that seems like a very pointless endeavour that we just took since modern Physics already accepts and declares such as mere tools – that ‘heat’ is a ‘virtual energy’ just as the ‘centrifugal force’ is a ‘virtual force’ and many others.

For one side there is the point that most of humankind is still stuck on denying, without a thought, the assertion that ‘cold does not exist’ and that even educated engineers and chemists, just as science communicators, love saying that ‘cold does not exist’ or ‘centrifugal force is not actual a force’, but still believe on the mystical fairy tales that ‘heat’ is ‘a thing’ and not just another ‘virtual force’ as a mere conceptual tool; and most ‘men of science’ nowadays still mindlessly assert absolute absurd as ‘the law of entropy’ as if some magical power that gives purpose and will to unanimated particles ‘explained’ anything – as was just made clear that no such divine power forcing things to a certain collective course is unreasonable, and much less necessary, when they all individually simply are selected from the surrounding pressures so that they converge on a same path with no intelligent design from god to ‘chaos and minimum amount of energy’.²⁷

The ‘laws of thermodynamic’ are merely a generalization and human tool to approximate the complex behaviour of a system composed of many small moving parts; they exist just as much as

²⁶ Although it will not be hard to find papers saying “The universal nature of gravity is also demonstrated by the fact that its basic equations closely resemble the laws of thermodynamics and hydrodynamics. So far, there has not been a clear explanation for this resemblance.”, I quote from one; devoid of any capacity for argumentation, but faithfully saying ‘it is clearly so’, and blind by their doctrines not seeing such ‘laws’ as the mere tools they are even after those two last have now been quite thoroughly demoted from a magical ‘law of nature’ to the product of those smaller molecular interactions which we arbitrarily define as something separate from all other forms and behaviours those interactions produce. That same paper goes on about ‘entropic forces’ as if molecules and their exact path had never been discovered; following the cultism of some ‘force of chaos’ guiding things to some universal purpose instead of the logical sequential interactions with the surroundings producing that exact final result as set by the initial condition of the system – no universal outside force required to control them to form that any result nor even any space for such extraneous hand of god, but each molecules following its own individual motion.

²⁷ Awfully somehow the ‘random motion of gases’ is still used to describe fire when we truly know there is no randomness to the exact path each molecule or ‘atom’ will take as they collide, but merely our inability to follow all those particles from their initial state onwards; still somehow one of our most stupid ideas, the guiding hand of chaos, is even today spewed out by the most ‘scientific’ media as if anything more than ignorant mysticism of the grossest kind.

‘heat’ does – a mere arbitrary concept for easy communication, but which has no counterpart, as a magical ‘force’ individual and independent from everything else, in actual reality.²⁸

We can see such admittance of magical powers is of no benefit, but rather hinders progress and truth, and it differs nothing on the Aristotelian model; and far from being so only to the ignorant masses or to negligent engineers this insidious worthless model permeates the very theoretical physicists who simply follow what they have always learnt and seek to ‘describing’ the world through magical intelligently designed laws and elementary species – both unnecessary and unjustifiable.

But more on that later.

As a sum, and another repetition, we have that the clumsy ‘laws’ of hydrodynamics and thermodynamics are wonderful engineering tools, but just so they also are nothing more than a tool; an illusion masking our chaotic ignorance, the unnecessary accounting of every particle or our incapacity to account for every detail of reality – it is an approximation and general behaviour of a set of particles which all experience a similar environment and thus individually behave nearly the same. But there is no ‘order’ or ‘law’, as some magic all-pervading ‘entropy’, guiding, or forcing, the collective mass to a certain state; the illusion of ‘heat’, and ‘laws’, is broken as soon as we truly describe the system and account for the causes of each of its parts.

That established from the basic parsimony and goodness of our criteria, and nowadays proved beyond doubt by brute force of observation²⁹, we can move on with the scene.

²⁸ And as ‘heat’ does not exist as such magical unique energy how much less it is ‘an useless energy lost forever after work’; or the absurdities that belong only to the grossest science fiction as the hyped acéphalous ‘heat-death of the universe’.

²⁹ The caloric gas was not invented by Dalton, but truly as he says that is the accepted theory of the time; and one which is very successful in quantifying heat transmission and improving the efficiency of engines – which were some erewhile unimaginable achievement of civilization that ‘worked our mines, impelled our ships, digs our ports and rivers, forges iron, carves wood, grinds grains, spins and weaves our clothes, transport our heaviest burdens’, as *sais Carnot in Réflexions sur la Puissance Motrice du Feu et sur les Machines Propres à Développer cette Puissance*.

But while this observation destroyed that view we still have a quite bad one very unlike the one of René whose praises I sung. The iteration of the example of René rubbing hands or anything, as the friction of two metals not ‘expelling gas from the inside’ but producing heat indefinitely just as paddles heating up water by motion and the clear link of the motion of gas molecules to their ‘temperature’, showed an even more powerful theory, yet this modern Kinetic theory is still ridden with mindless mysticism and comes much shorter than that of René whose analysis of the environmental pressures deal in how the system evolves in response to them instead of the current babble where ‘probability’ is taken as a reality and not as our lack of tools in

All that motion of the air, metal and milk came not from a sequence of heavy blows, which clearly from all established perfectly do heat things up, but by the ‘burning’ of the gas; even if ‘heat’ is just motion, where did that motion come from when the gas was so still? How did the carbon molecules by ‘reacting’ with the oxygen to form new molecules ‘produce’ all that ‘motion’?

Dalton naturally noticed exothermic reactions and his interesting description of them was that as two ‘atoms’ came together to form ‘another atom’ it would take on the specific heat on that other element; thus are combustion the forming of such new element, which god defined some specific amount of ‘caloric gas’ that it could hold, that release the extra gas from the fused atoms.

It is interesting because today we know that they form ‘molecules’ by means of ‘bonding’ on their electron shell and that the ‘heat-gas’ does not exist since that is just the macroscopic effect of the collective motion of such particles. How, then, do we explain that ‘energy of combustion’ being released?

We do not!

We have literally not deigned important enough to provide any theory or answer; for over a century that René has been proved right beyond doubt and physicist, and chemists, simply decided to quantify how much each combination releases without providing any explanation or reasoning for what is happening – the ‘gas’ is disproven, but they go on indoctrinating that ‘bonds store energy’ and that ‘the energy comes from bonds’ although if asked what that is ‘bond’ is just some placeholder magical concept with no element of reality corresponding to such energy storage.

Derek once upon a time was questioning people about that, as he made his toy models of magnetic atoms, and on Scishow he made the beautiful question of ‘How do bonds release energy? Where was store that energy of bonds?’³⁰; sadly lovely Hank exerted of his usual neutrality and tried to evade the question, even belittling its significance as pointless, instead of taking any stand.

tracking the exact motion of each particle; and which intellectual degeneration led on to create more and more sacred magical powers to ‘make zero the probability to go back in time’ – insane additions that confuse and mislead those whose weak mind impose those meaningless additions upon reality, as the cult of the guiding force of chaos mentioned just above, not seeing that is just a tool upon idealized simplistic models to roughly estimate an approximation.

³⁰ His question is much more convoluted and mainly about the view of ‘storing energy’ versus ‘being a sign of energy spent’, but the way he compared as the exact same process as nuclear fusion shows he, without realising it but instinctively, did hint at the same mass-particle as mere energy that compose the structure of bonds, motion and photons.

I find this conclusion so very sad when to me it is so plain and obvious the answer; and not from the creation of some magical ‘bond-entity’ or new ‘forces’, but by pure necessity from what we have already admitted.

Yet, before I can just say it, we need to treat of the mechanisms of creation.

The atomists we so flatly denied at the beginning were actually right now that through René we have produced an explanation of how, or ‘why’, it is indeed a single thing, but as we saw we had no choice but to reject them since they provided no such explanation or justification for such radical parsimony – René, too, was right, however the proof only existed on this thinking mind as his eventually credited it all on some laws intelligently designed by god for that purpose, the Aristotelian ‘the cause of causes’, so that³¹, just the Intelligence of Laplace, it failed to produce even the most basic induction of why $P(n+1)$ would be true of how could simpler parts produce more complex and ‘so organized’ ones.

They were right in eliciting the ‘absolute determinism’, as was Albert although even less justifiable, that is the simply requirement of ‘necessity’ from cause and effect or of ‘logic’, but relying on the same creationist ideas of intelligently designed ‘laws’ failed to provide a justifiable ‘how’.

³¹ “Car Dieu a si merveilleusement établi ces Loix, qu’encore que nous supposions qu’il ne crée rien de plus que ce que j’ay dit, & même qu’il ne mette en cecy aucun ordre proportionné ; mais qu’il en compose vn cahos le plus confus & le plus embrouillé que les Poëtes puissent décrire, elles font suffisantes pour faire que les parties de ce cahos se démêlent d’elles-mêmes, & se disposent en si bon ordre, qu’elles auront la forme d’un Monde tres-parfait.”

– Traité du Monde et de la Lumière.

II – Simple Syllogism Upon The Method

‘Life is brief, but art is macrouς’³², or the less faithful and more intelligible ‘life is short, but science is long’, is a famous line; and as most popular quotes it sounds as nice as shallow and it flows on without any further thought or consideration.

Someone who feel specially touched by it might give it thoughts and an ‘explanation’ of the weight of what is truly being said; perhaps by frustration at his own efforts at an answer he felt that:

“This inert rock with its existence ridicules all my intellect and knowledge, but being deficient on my capacity of reasoning or ignorant I can only bow down and say that I know it not; the only possible answer and infinitely more useful and beautiful than to embrace the horrendous comfort of superstition with some magic explanation that justifies all ignorance as inevitable – in contrast to accepting my current incapacity of answering and adopt the logic path of investigating and question which allows that on the future someone contributes some more analysis beyond of what I went until when they will find out what was to me unknowable, although most still choose to condemn them into being acephalous beings comfortable with their pernicious blindness solely for the very detriment of all future prospect to humankind.

Only those who seek find it; and what is neglected escapes – short as life is there is the next generation continuing the long art that a single one could not make.”³³

And such noblest sentiment of the sciences and the highest altruism to mankind is not seeing too much or giving too much credit to some ‘sensationalist line’; it is indeed quite right and aligned with the more exact and extensive description of it.³⁴

³² “Ο βίος βραχύς, ἡ δὲ τέχνη μακρὴ”
– Αφορισμοί, Aphorisms, I.

Hippocrates, two thousand three hundred and ninety three years ago. Often called ‘the father of Medicine’ by his revolution of ancient Greek medicine in using prognosis and a coherent model to explain, and treat, all diseases; yet, as shown here, he is much closer to a ‘father of Science’ as his methods are truly the paradigm of scientific enquiry to an even greater extent than our latest Scientific Revolution.

³³ *Kaiho I: Ⅴ: V:γ`.*

³⁴ “Ἱητρικῇ δὲ πάλαι πάντα ὑπάρχει, καὶ ἀρχὴ καὶ ὁδὸς εὐρημένη, καθ’ ἣν τὰ εὐρημένα πολλὰ τε καὶ καλῶς ἔχοντα εὐρίηται ἐν πολλῷ χρόνῳ, καὶ τὰ λοιπὰ εὐρεθήσεται, ἣν τις ἰκανός τε ἐὼν καὶ τὰ εὐρημένα εἰδὼς ἐκ τούτων ὁρμώμενος ζητῇ. ὅστις δὲ ταῦτα ἀποβαλὼν καὶ ἀποδοκιμάσας πάντα, ἐτέρῃ ὁδῷ καὶ ἐτέρῳ σχήματι

Yet that comes short to the extent of how much science also changes and shapes lives just as progress itself is forced upon us simply because ‘not all things are good for us and thus only the most fit prosper while the less fit either dies or seek another niche’; this was said by Hippocrates over two millennia before this very same statement reformulated all biology and became the most important book ever written.

Or more exactly he said that ‘the strong’ can handle hard foods and environments while ‘the weak’ sought ‘foods that are better for the body’ and thus invented the art of medicine and other sciences³⁵; which is rather unbelievable how he could so well state environmental pressures and

ἐπιχειρεῖ ζητεῖν, καὶ φησὶ τι ἐξευρηκέναι, ἐξηπάτηται καὶ ἐξαπατᾶται: ἀδύνατον γάρ: δι’ ἧς δὲ ἀνάγκας ἀδύνατον, ἐγὼ πειρήσομαι ἐπιδείξαι, λέγων καὶ ἐπιδεικνύων τὴν τέχνην ὃ τι ἐστίν.”

- Περί αρχαίας ιατρικῆς, About Archaic Medicine, II, where he does say it with every word that ‘art is built progressively by advances upon that which has already been made rather than by inventing new models ignoring everything already discovered’; truly the same as that beautiful interpretation and to me still the very role model of scientific sentiment.

³⁵ “Τὴν γὰρ ἀρχὴν οὗτ’ ἂν εὐρέθῃ ἡ τέχνη ἢ ἱατρικὴ οὗτ’ ἂν ἐξηγήθῃ—οὐδὲν γὰρ αὐτῆς ἔδει-εἰ τοῖσι κάμνουσι τῶν ἀνθρώπων τὰ αὐτὰ διατρεφόμενοι τε καὶ προσφερομένοι, ἅπερ οἱ ὑγιαίνοντες ἐσθίουσιν τε καὶ πίνουσι καὶ ἄλλα διατρέπονται, συνέφερον, καὶ μὴ ἦν ἕτερα τούτων βελτίω. νῦν δὲ αὐτὴ ἡ ἀνάγκη ἱατρικὴν ἐποίησεν ζητηθῆναι τε καὶ εὐρεθῆναι ἀνθρώποις, ὅτι τοῖσι κάμνουσι ταῦτα προσφερομένοι, ἅπερ οἱ ὑγιαίνοντες, οὐ συνέφερον, ὥς οὐδὲ νῦν συμφέρει. ἔτι δὲ ἄνωθεν ἔγωγε ἀξιώσας οὐδ’ ἂν τὴν τῶν ὑγιαίνοντων διαίταν τε καὶ τροφήν, ἢ νῦν χρέονται, εὐρεθῆναι, εἰ ἐξήρκει τῷ ἀνθρώπῳ ταῦτα ἐσθίοντι καὶ πίνοντι βοῆ τε καὶ ἵππῳ καὶ πᾶσιν ἐκτὸς ἀνθρώπου, οἷον τὰ ἐκ τῆς γῆς φυόμενα, καρπούς τε καὶ ὕλην καὶ χόρτον. ἀπὸ τούτων γὰρ καὶ τρέφονται καὶ αὔξονται καὶ ἄπονοι διάγουσιν οὐδὲν προσδεόμενοι ἄλλης διαίτης. καὶ τοὶ τὴν γε ἀρχὴν ἔγωγε δοκέω καὶ τὸν ἄνθρωπον τοιαύτη τροφή κεκρησθαι. τὰ δὲ νῦν διαιτήματα εὐρημένα καὶ τετελεσμένα ἐν πολλῷ χρόνῳ γεγενῆσθαι μοι δοκεῖ. ὥς γὰρ ἔπασχον πολλὰ τε καὶ δεινὰ ὑπὸ ἰσχυρῆς τε καὶ θηριώδους διαίτης ὁμάς τε καὶ ἄκριτα καὶ μεγάλας δυνάμεις ἔχοντα ἐσφερόμενοι. οἷά περ ἂν καὶ νῦν ὑπ’ αὐτῶν πάσχοιεν πόνοις τε ἰσχυροῖσι καὶ νοῦσοις περιπίπτοντες καὶ διὰ τάχους θανάτοισι. ἦσσαν μὲν οὖν ταῦτα τότε εἰκὸς ἦν πάσχειν διὰ τὴν συνήθειαν, ἰσχυρῶς δὲ καὶ τότε. καὶ τοὺς μὲν πλείστους τε καὶ ἀσθενεστέραν φύσιν ἔχοντας ἀπόλλυσθαι εἰκός, τοὺς δὲ τούτων ὑπερέχοντας πλείω χρόνον ἀντέχειν: ὥσπερ καὶ νῦν ἀπὸ τῶν ἰσχυρῶν βρωμάτων οἱ μὲν ῥηϊδίως ἀπαλλάσσονται, οἱ δὲ μετὰ πολλῶν πόνων τε καὶ κακῶν. διὰ δὲ ταύτην τὴν αἰτίην καὶ οὗτοί μοι δοκεῖτε ζητῆσαι τροφήν ἀρμόζουσαν τῇ φύσει καὶ εὐρεῖν ταύτην, ἢ νῦν χρεώμεθα. ἐκ μὲν οὖν τῶν πυρῶν βρέξαντές σφας καὶ πίσαντες καὶ καταλέσαντές τε καὶ διασίσσαντες καὶ φορύξαντες καὶ ὀπήσαντες ἀπετέλεσαν ἄρτον, ἐκ δὲ τῶν κριθῶν μάζαν: ἄλλα τε πολλὰ περὶ ταῦτα πρηγματευσάμενοι ἤψησάν τε καὶ ὥπησαν καὶ ἔμιζαν, καὶ ἐκέρασαν τὰ ἰσχυρά τε καὶ ἄκριτα τοῖς ἀσθενεστέροις, πλάσσοντες πάντα πρὸς τὴν τοῦ ἀνθρώπου φύσιν τε καὶ δύναμιν, ἡγεύμενοι, ὅσα μὲν ἂν ἰσχυρότερα ἢ ἡ δύνησεται κρατεῖν ἢ φύσις, ἦν ἐμφέρηται, ἀπὸ τούτων δ’ αὐτῶν πόνους τε καὶ νοῦσους καὶ θανάτους ἐσσεσθαι, ὁπόσων δ’ ἂν δύνηται ἐπικρατεῖν, ἀπὸ τούτων τροφήν τε καὶ αὐξησιν καὶ ὑγίειν. τῷ δὲ εὐρήματι τούτῳ καὶ ζητήματι τί ἂν τις ὀνομα δικαιότερον ἢ προσήκον μᾶλλον θεῖη ἢ ἱατρικὴν; ὅτι γε εὐρήται ἐπὶ τῇ τοῦ ἀνθρώπου ὑγίει τε καὶ σωτηρίῃ καὶ τροφῇ, ἄλλαγμα ἐκείνης τῆς

the necessary result of that selection, but he kept that simply to his field of medicine and even with his knowledge of inheritance he failed to extend or deal upon it any longer.

So the individual life is indeed short, but the cumulative changes developed by selection over a long time produces such long art; the modern degree of perfection did not always exist, but came gradually through many less perfect forms.

Another one of his so radical and mind-blowing insights is that ‘some say that it is impossible to do medicine without first knowing what man is’; and so he replies that the statement of philosophers about ‘what man is and his origins’ have even less to do with the really of nature – that ‘one cannot ascertain anything about nature from anywhere else but from medicine’ and that we will know the answer to those only when we indeed attain comprehension over the entire field of medicine.³⁶

Such most stunning questions have indeed been answered by the understanding of the natural work and its history; and indeed we can obtain an easy victory on every other field³⁷ because we for a long time had the answer before us.

διαίτης, ἐξ ἧς οἱ πόνοι καὶ νοῦσοι καὶ θάνατοι ἐγίνοντο.”

– Περὶ ἀρχαίας ιητρικῆς, About Archaic Medicine, III.

³⁶ “Λέγουσι δὲ τινες ἰητροὶ καὶ σοφισταί, ὥς οὐκ εἶη δυνατόν ιητρικὴν εἰδέναι ὅστις μὴ οἶδεν ὃ τί ἐστὶν ἄνθρωπος. ἀλλὰ τοῦτο δεῖ καταμαθεῖν τὸν μέλλοντα ὀρθῶς θεραπεύσειν τοὺς ἀνθρώπους. τείνει δὲ αὐτοῖς ὁ

λόγος ἐς φιλοσοφίην, καθάπερ Ἐμπεδοκλῆς ἢ ἄλλοι οἱ περὶ φύσιος γεγράφασιν ἐξ ἀρχῆς ὃ τί ἐστὶν ἄνθρωπος, καὶ ὅπως ἐγένετο πρῶτον καὶ ὁπόθεν συνεπάγη. ἐγὼ δὲ τοῦτο μὲν, ὅσα τινὶ εἴρηται ἢ σοφιστῇ ἢ ἰητρῷ ἢ γέγραπται περὶ φύσιος, ἥσσον νομίζω τῇ ιητρικῇ τέχνῃ προσήκειν ἢ τῇ γραφικῇ. νομίζω δὲ περὶ φύσιος γνῶναι τι σαφὲς οὐδαμῶθεν ἄλλοθεν εἶναι ἢ ἐξ ιητρικῆς; τοῦτο δὲ οἷόν τε καταμαθεῖν, ὅταν αὐτὴν τις τὴν ιητρικὴν ὀρθῶς περιλάβῃ; μέχρι δὲ τούτου πολλοῦ μοι δοκεῖ δεῖν; λέγω δὲ ταύτην τὴν ἱστορίην εἰδέναι, ἄνθρωπος τί ἐστὶν καὶ δι’ οἷας αἰτίας γίνεται καὶ ἄλλα ἀκριβέως. ἐπεὶ τοῦτο γέ μοι δοκεῖ ἀναγκαῖον εἶναι ἰητρῷ περὶ φύσιος εἰδέναι καὶ πάννυ σπουδάσαι ὡς εἴσεται”

– Περὶ ἀρχαίας ιητρικῆς, About Archaic Medicine, XX.

³⁷ “Tis evident, that all the sciences have a relation, greater or less, to human nature; and that however wide any of them may seem to run from it, they still return back by one passage or another.

...

Here then is the only expedient, from which we can hope for success, in our philosophical researches, to leave the tedious lingering method, which we have hitherto followed, and instead of taking now and then a castle or village on the frontier, to march directly to the capital or center of these sciences, to human nature itself; which being once masters of, we may every where else hope for an easy victory.”

– A Treatise of Human Nature.

Knowing the origin of the mammalian brain and the exact neurological mechanisms of its behaviour finally gave us the way to understand the subjects of economics, politics and social behaviour; the archaic metaphysical madness of psychology in philosophical frameworks and ten thousand other ‘non-exact’ fields are well over-due and proved to be entirely meaningless as works of fiction flying far from any reality and certainty³⁸ – since Chemistry is just a small part of Physics and Biology a small part of Chemistry where humans are a very tiny fraction of that biology and all their subjects are a produce of that biological machinery they are, yet ‘they go on as if Robert had never existed’³⁹.

³⁸ “Puis pour les autres science d’aurant qu’elles empruntent leurs principes de la Philosophie, ie iugeois qu’on ne pouuoit auoir rien bafi qui fust folide, fur des fondemens fi peu fermes.”

– Discours de la Methode I, where he says how the science are still built upon philosophy as the way choosen to interpret that collection of facts from reality; which is indeed what I criticize here, but following from above we can take these few lines to mention how knowing thus The Descent of Man renders all past and future Metaphysics perfectly vain and furnishes the complete answer to the absolutely meaningless confusion of

René who was forced to take the insane maxim of ‘ie penfe, donc ie fuis’.

“On fçait defia aflés que c’eſt l’âme qui ſent, & non le cors.”

– La Dioptrique IV, where he goes on about that maxim in how ‘it is the soul that feels, and not the bodies’ even when he is describing how understanding the eye and mechanical magnification of stimuli can improve the power of the senses, but then he descend into the retardation of his religion that somehow that stimuli has to be transmitted to god to parse it through the perfect Platonic forms that ‘have that perfect model of understanding that cannot possible be contained within us’ forcibly inserting the deity on the process; which can sum all of the later Renaissance and all irrational rubbish written under the name of ‘philosophy’, but which that comprehension of the human brain and origin promptly dispel all such fanciful delusions and the imaginative fables of all ‘moral philosophy’ and the imaginary divisions of questioning between ‘reality and senses’.

³⁹ “Philosophy and the subjects known as ‘humanities’ are still taught almost as if Darwin had never lived.”

– The Selfish Gene I.

“Es ist nicht Vermehrung, sondern Verunstaltung der Wissenschaften, wenn man ihre Grenzen ineinander laufen läßt”

– Kritik der reinen Vernunft, Critic of Pure Logic, Preface II, where so well he presents the worthlessness of all such metaphysical unrealities as the subjects he treads in; saying ‘it is not a contribution, but a disfiguring, of science to allow its border to overflow thus one to the other’. Defending his arbitrary inexistent borders for so shamelessly ‘abolish knowledge in order to leave space for faith’, as he says little after describing as the ‘physical world’ has to be seen as simply a complement and be conformed to those ‘higher feelings of the spiritual reality’ that he feel to be true inside of him:

“Es ist hiermit ebenso, als mit den ersten Gedanken des Kopernikus bewandt, der, nachdem es mit der Erklärung der Himmelsbewegungen nicht gut fort wollte, wenn er annahm, das ganze Sternenheer drehe sich um den Zuschauer, versuchte, ob es nicht besser gelingen möchte, wenn er den Zuschauer sich drehen, und dagegen die Sterne in Ruhe ließ. In der Metaphysik kann man nun, was die Anschauung der Gegenstände betrifft, es auf ähnliche Weise versuchen. Wenn die Anschauung sich nach der Beschaffenheit der

When we consider our ignorance about if theories are even sufficient to explain or which is less imprecise we can still judge how ‘good’ it is by seeing what is the consequence and results of accepting each; to what understanding or utility could one have over the other.

Hippocrates was a man faithful to the gods and baselessly believed the fairy tales, but even then when acquiring exact knowledge about the human body he saw that it was both unnecessary to attribute some things to the gods as it was right down impossible since it all occurred perfectly with no role for the mystical power to play on the process.

He might have heard the phrase that ‘he died because his time had come’; which as a believer he could accept as an explanation until the point he acquired knowledge – for knowledge is power, both to free himself from superstition as from the real cause of the disease.

If he were to open the body he could find ‘something strange’ on the liver or veins so to determinate that part of the body is vital and that its failure led to death; and that such failure too was obviously caused by that substance or harm that the body was subjected too so that by avoiding it one too will live on longer and healthier.

Another common line today is that ‘god wanted another angel in heaven’, but what Hippocrates asserts, at some superstition that some god caused impotence if not worshipped properly, is that ‘this disease is just as divine as every other is, because no disease is more divine or more human than any other, and none arise but from a natural cause’⁴⁰.

He made the very bold assertion that all diseases come from a ‘natural cause’; even when he was so ignorant and there are so many diseases around the world that he did not know – just as today

Gegenstände richten müßte, so sehe ich nicht ein, wie man a priori von ihr etwas wissen könne; richtet sich aber der Gegenstand (als Objekt der Sinne) nach der Beschaffenheit unseres Anschauungsvermögens, so kann ich mir diese Möglichkeit ganz wohl vorstellen.

...

Ich mußte also das Wissen aufheben, um zum Glauben Platz zu bekommen.”.

It is quite like all these others creationist ideas of ‘elements’ seen before and attribution to magic entities as an ‘explanation’, but simply much more explicitly done; whose worthlessness and ‘no goodness’, the ‘invalidity’ as some accept theory, have been clearly discussed thus far.

⁴⁰ “οἱ μὲν οὖν ἐπιχώριοι τὴν αἰτίην προστιθέασι θεῶ καὶ σέβονται τούτους τοὺς ἀνθρώπους καὶ προσκυνέουσι, δεδοικότες περὶ ἐωυτῶν ἕκαστοι. ἐμοὶ δὲ καὶ αὐτῷ δοκεῖ ταῦτα τὰ πάθεα θεῶ εἶναι καὶ τᾶλλα πάντα καὶ οὐδὲν ἕτερον ἐτέρου θειότερον οὐδὲ ἀνθρωπινώτερον, ἀλλὰ πάντα ὁμοῖα καὶ πάντα θεῶ. ἕκαστον δὲ αὐτῶν ἔχει φύσιν τὴν ἐωυτοῦ καὶ οὐδὲν ἄνευ φύσιος γίνεται.”

– Περί αέρων, υδάτων, τόπων, Sobre Ar, Água e Terra, XXII.

there are so many we still do not know and so many yet unknowable since they are yet to come into existence.

But who of us would deny that he is right?

We can assert about what we know not and give no details about any disease, but still have a good theory and be right on asserting so; since it is a 'good' assertion.

Asserting otherwise, that is admitting that 'his time has come' and such 'divine causes', meant having that 'comforting answer', although it answers nothing and does not teach us anything, that as we saw is no good; accepting it forever traps us below the yoke of such torment and far from only 'not being good' it is directly harmful to all who accept it and the very future of humankind. Not only there is no reason to admit or suppose such fantasy; as doing so would cause only our harm.

Thus nothingness would be better than it, that is simply admitting ignorance and rejecting the proposal with no 'counter-explanation'; and his proposal that there is a cause that we must find, even with no 'proof' or argument giving a reason is already an amazing theory for instead of the 'answer' it provides a 'method' – it leads to knowledge, and its power, and it is thus the choice we are forced to take, until it is proved to be wrong and thus a harmful pursuit of unreality.

Today we are still far from describing 'every disease' or how exactly most of those we know really work, but it is also beyond doubt that we understand exactly them all; our very definition of 'disease' is not the ancient one of 'something weird happening to that person' but precisely some kind of phenomenon within our bodies – linked perfectly with a proper definition of what 'life' and 'death' are.

If we ask 'why does anything die at all?' we can promptly answer that 'they simply did not fulfil the prerequisites of life'; what sounds rather like a cheeky answer, yet instead it is a show of our absolute understanding of it – that a human, or anything, dies when there is organ failure, which makes it impossible to keep the biologic process necessary for 'life'.

Organs fail when they are hindered from doing their functions; be it a spear or a bullet to the heart or some thick undissolvable grease on the veins – and a disease is merely any such thing that will impair the stretchiness of veins, or make them too loose and porous, or thicken, or dilute, the blood or any other such physical tampering of a process.

From the interior of every cell to the higher view of tissues and organs, the body is a giant collection of such chemical processes that maintain a stable environment for those processes to go on; organisms who are bad at doing that, that are less resilient or 'fit', cannot maintain their stability long so that they go extinct while those who can spread and multiply on – 'life' is that

collection of processes that together form some coherent whole of an ‘organism’, and ‘death’ is merely the decoherence when all those parts go their own way no longer forming a coherent whole.

A ‘disease’ then is exactly described and understood as any such disturbances and hindering to those processes of life; be our own cells turning cancerous and eating our resources, be it a virus destroying our cells to spread its own kind, be it some ‘toxic’ compound we have absorbed as heavy metals or plastic which our body uses to build some tissue that cannot do its functions, be it some compound in food that accumulates and get in the way of the processes, be it some defective DNA lacking the code to produce some compounds which we have not then eaten that vitamin produced by some other organism so that we cannot now perform that vital process and so on – that is what a ‘disease’ is, just some disturbance to the bodily processes, and when some disturbance is too great for the organism to restore equilibrium then those processes lose their ‘coherence’ at ‘death’.⁴⁴

This is not a comprehensive list of all diseases and I do not mention even a single one, but it is a deep understanding of the human body which allows us to investigate any disease and progressive know more about it until we can render it entirely harmless; it comes from precise knowledge and observation of the human body and confirmed with all diseases we have seen, but it is built upon that very idea that there is some cure and cause to the malfunction of the body rather than the

⁴⁴ ‘Senescence’, that is ‘aging’ and ‘getting old’, is likewise just another disease; a certain quirk of the DNA replication mechanism of our cells that causes the new cell to be a little worse than its progenitor and so to the next one it produces non-lossless copies every time – until they degrade to the point of eventually no longer working.

Such a simple thing, that other living beings have developed repair mechanisms that make them biologically immortal rather than merely leaving a distinct offspring, but our absolute mismanagement of resources both in corruption as investing on giant pseudo-scientific projects or merely of less importance has left us today still bound to this dreadful diseased destiny as if, as most still so foolish ‘believe’, it were some inescapable fate that we have to submit to; and which absolute horrors have driven humankind towards ideas as detrimental as of such despicable deities who use it to compel us at serving them in performing meaningless actions of worship for purely imaginary aims in exchange for the cure.

Many others bodily processes start to fail with age by the accumulation of harmful things that the body is unable to clean up, as long suspected of Alzheimer, but once we engineer ourselves to rewrite our DNA at will like octopuses do in RNA those things will be easily cured; our model perfectly describes it and we need simply more data of the infinitude of parts involved in that abstraction of the spliceosome overloading the functions of the gene complexes, the occult information of introns and the surrounding epigenetic influences in how the molecules bend and fit together that so lead to the building, and maintaining, of these biological machineries we are.

That is our modern medicine, and biology with chemistry and every other field so unified seamlessly in a single model describing all of reality, and while so different in details than that of Hippocrates it is the descendent of that idea and model; only through that method of inquiry we have gathered the facts and information to understand it and so thus also make the cure for it.

other guess about a divine origin whole beyond our control – so that when we lay those two guesses side by side with no knowledge we can still see how only holds any sense and value in adopting.

Another still very common popular belief is on the same magical being also causing natural disasters; where exactly the same argument can be used to reject the ‘theories’ be it from their baselessness on any evidence or from the very harm of adopting fantasies as reality – the harm of both being unprepared⁴² to deal with problems as of directly rejecting help as the false feeling of safety and understanding makes them irrationally attack all who doubt and question.

The cause of misery is the very system of belief they decided to follow; “whence do come all relentless raging of sickness and disasters found on the barbarous notions out sphere of civilization? From the soil, sky and their bodies? Is it because of our soil being good and theirs worthless; from our climate bless us with the abundance from the heavenly coffers and curse them with scarcity and disaster – from us having a fine pedigree in our holy pure blood and they having that of inferior sub-human races? Far from such fallacies; the only difference is the state of development in our arts of the scientific.”.⁴³

The mere analysis of the theory shows us the most disturbing and undesirable of imagery; that is a clear reason why one would quickly deny to follow such, but that is leaving our point that is merely the seeking of ‘truth’.

⁴²⁴⁴ “Our existence today is a demonstration of our resistance, and I think knowledge will increase the resilience of the people in the world.”

– says one of the survivors of the recent eruption of Tonga on the documentary of Nova PBS about such; since they began to ran yelling ‘tsunami’ knowing what was to come and so there was a high rate of survivors, survivors who say ‘we lost all we had, but we have what matters most that is our lives’, since they dutifully teach the children the knowledge of what to do if a tremor or eruption happens.

The narrator concludes the documentary saying ‘Being ready is Tonga’s lesson for the rest of the planet’ and indeed the scientific mindset is found all around the world, but the plague of mindless ‘beliefs’ as religions still rule the mind of most with superstitions and our very ‘science’ is still deeply rooted on such magical ‘explanations’.

⁴³ “Rursus (si placet) reputet quipiam, quantum intersit inter hominum vitam in excultissima quapiam Europae provincia, et in regione aliqua Novae Indiae maxime fera et barbara: ea tantum differre existimabit, ut merito hominem homini Deum esse, non solum propter auxilium et beneficium, sed etiam per status comparationem, recte dici possit. Atque hoc non solum, non coelum, non corpora, sed artes praestant.”
– Novum Organum Unus CXXIX.

But mentioning horrible apocalyptic disasters⁴⁴ leads us straight to a man with some capacity to link a chain of causes to a certain effect was Malthus; so that he could easily show how some apparent good action, as the British law giving money to the poor, was actually a very bad one – cruelty hidden in ignorance that lead simply to a general degradation of the social state of those very poor rather than helping them. Which is by giving some item the government was not making that item cheaper and more accessible to those in need, but rather devaluing the labour to obtain the item; so that redistribution of wealth has the same effect has minting more coins, or today printing more money, since it increases the vouchers for which that production has to be

⁴⁴ Merely mentioning hardly awakens any imagery or urgency, so here is the very powerful description of Robert about the effects of an earthquake:

“After viewing Concepcion, I cannot understand how the greater number of inhabitants escaped unhurt. The houses in many parts fell outwards ; thus forming in the middle of the streets little hillocks of brickwork and rubbish. Mr. Rous, the English consul, told us that he was at breakfast when the first movement warned him to run out. He had scarcely reached the middle of the courtyard, when one side of his house came thundering down. He retained presence of mind to remember, that if he once got on the top of that part which had already fallen, he should be safe. Not being able, from the motion of the ground, to stand, he crawled up on his hands and knees ; and no sooner had he ascended this little eminence, than the other side of the house fell in, the great beams sweeping close in front of his head. With his eyes blinded, and his mouth choked with the cloud of dust which darkened the sky, at last he gained the street. As shock succeeded shock, at the interval of a few minutes, no one dared approach the shattered ruins ; and no one knew whether his dearest friends and relations might not be perishing from the want of help. The thatched roofs fell over the fires, and flames burst forth in all parts. Hundreds knew themselves to be ruined, and few had the means of providing food for the day. Can a more miserable and fearful scene be imagined?”

...

Pools of salt water yet remained in the streets ; and children, making boats with old tables and chairs, appeared as happy as their parents were miserable.

...

A bad earthquake at once destroys the oldest associations : the world, the very emblem of all that is solid, has moved beneath our feet like a crust over a fluid ;— one second of time has conveyed to the mind a strange idea of insecurity, which hours of reflection would never have created.

...

Earthquakes alone are sufficient to destroy the prosperity of any country. If, for instance, beneath England, the now inert subterranean forces should exert those powers which most assuredly in former geological ages they have exerted, how completely would the entire condition of the country be changed! What would become of the lofty houses, thickly-packed cities, great manufacturies, the beautiful public and private edifices? If the new period of disturbance were first to commence by some great earthquake in the dead of the night, how terrific would be the carnage! England would at once be bankrupt ; all papers, records, and accounts would from that moment be lost. Government being unable to collect the taxes, and failing to maintain its authority, the hand of violence and rapine would go uncontrolled. In every large town famine would be proclaimed, pestilence and death following in its train.”

– Voyages of the Adventure and Beagle III: XVI.

divided for without increasing the product itself – making it even harder for them to rise from the state of misery and much to the contrary growing the rate of poverty by reducing the value of the only good the manual labourers had.

He is most famous for how he could foresee, very real and exact, catastrophes that would come from their current policies and behaviour; quite like today and our climate crisis, he defined unsustainability centuries before our current state – and how sweet his critic as he saw the birth of modern democracy happening, a truly awful and unsustainable system quite responsible for most of our problems today since they stem from the mismanagement of having ignorant popular clowns in power rather than from our technological inability to deal with those problems.

But let us leave it at that; I have a giant scene about him on Kaiho and there I treat of more specific niches, the consequences of this theory, as on politics, economics and morality. Here I shall deal simply with the ‘truth’ or ‘validity’ of it, as well as its very presentation, not of its infinitely many consequences and applications.

So of Malthus we will rush the conclusion of his great scene; which last paragraph finishes it on lines akin to ‘And this is the true terror of Malthusian pessimism’. Since today he is mostly criticized very vainly for ‘his failure in predicting the industrial revolution’, which simply postponed the numerical limit to his doom scenarios, but far from invalidating his claims.

And while most of it holds on the aspect of unsustainable policies, I here will resume the scene into one simple comparison between the core idea that permeates all of his conclusions.

He directly mentioned the inefficiency of cattle on its usage of land, even before it was known that their accursed microbiota produces methane, but let it pass by simply saying that ‘it is inefficient, but the manure is necessary for the plantation to produce well’ without any of his loved numerical analyses of how could that possibly be worth the food it took for them to produce that manure. But what is made clear is his obvious knowledge of manuring; a technique known from pre-history. Just as the burning of fields and the leaving of plant matter on the soil were well known to be good fertilizers; while the more advanced technique of crops rotations had had several advancement by his time.

A child can tell that there has some common factor on all these things which are beneficial to plants; some ‘fertilizing element’ – and by his time many such alchemical reductions and elements had been found, Dalton releasing his work during his lifetime.

To a smart man who could see beyond apparent ‘good actions’ and chain several necessary consequences to arrive at some complex effect it should be a fair easy link to make; even more when his life was dedicated to such a cause of denouncing future dangers and how to better make policies to reduce them.

Yet, he did not.

In fact he flat out denied any possibility of such a thing.

His answer to the ‘meaning of life’ was already set on his baseless beliefs and he denied that anything, but the might of the creator, could make seeds germinate; it was unconceivable to his mind that ‘the powers of selection, combination, and transmutation, which every seed shews, are truly miraculous. Who can imagine that these wonderful faculties are contained in these little bits of matter? To me it appears much more philosophical to suppose that the mighty God of nature is present in full energy in all these operations. To this all powerful Being, it would be equally easy to raise an oak without an acorn as with one.’⁴⁵

⁴⁵ “The powers of selection, combination, and transmutation, which every seed shews, are truly miraculous. Who can imagine that these wonderful faculties are contained in these little bits of matter? To me it appears much more philosophical to suppose that the mighty God of nature is present in full energy in all these operations. To this all powerful Being, it would be equally easy to raise an oak without an acorn as with one. The preparatory process of putting seeds into the ground is merely ordained for the use of man, as one among the various other excitements necessary to awaken matter into mind. It is an idea that will be found consistent, equally with the natural phenomena around us, with the various events of human life, and with the successive revelations of God to man, to suppose that the world is a mighty process for the creation and formation of mind. Many vessels will necessarily come out of this great furnace in wrong shapes. These will be broken and thrown aside as useless; while those vessels whose forms are full of truth, grace, and loveliness, will be wafted into happier situations, nearer the presence of the mighty maker.”

- An Essay on the Principle of Population XII, even when he knew full well that they inherited traits based on that tree that produced the seed and not ‘reset as a base model of the species’ as a new miracle of creation every time; and when sporology, the embryology of seed, had already been studied by many as the grand authority of Leeuwenhoek had long described how the different parts of the seeds correspond and are analogous to those of the adult plant, not ‘just a little pebble’ or ‘little bits of matter’, and the ontogeny of those parts as it gradually grows to maturity.

Thomas Robert Malthus, a hundred and eighty nine years ago. An economist which using of cause and effect showed the grand inevitable miseries that unsustainable actions eventually lead to; which so greatly influenced the Economy of Nature and the development of sciences – even when he himself, as here shown, meant to inspire the complete opposite of that revolution of freedom from old ideas.

“The necessity of food for the support of life, gives rise, probably, to a greater quantity of exertion, than any other want, bodily or mental. The Supreme Being has ordained, that the earth shall not produce food in great quantities, till much preparatory labour and ingenuity has been exercised upon its surface. There is no conceivable connection to our comprehensions, between the seed, and the plant, or tree, that rises from it. The Supreme Creator might, undoubtedly, raise up plants of all kinds, for the use of his creatures, without the assistance of those little bits of matter, which we call seed, or even without the assisting labour and attention of man. The processes of ploughing and clearing the ground, of collecting and sowing seeds, are not surely for

the assistance of God in his creation; but are made previously necessary to the enjoyment of the blessings of life, in order to rouse man into action, and form his mind to reason.”

- An Essay on the Principle of Population XVIII, where he exemplifies that ‘if a barbarian felt no hunger or cold, or any necessity, it would lay down under a tree forever with no stimuli to rouse him to action’ so that all of life and the world was a little playground to ‘prepare people and select those apt to live with god forever’; that ‘perfect design’ of the world being his argument against ‘making-up new kinds of immortality’ by rejecting ‘the light of revelation which absolutely promises eternal life’ with the further laughable ‘arguments’ that the resurrection of a spiritual body coming from the natural one is much more likely than any such science because they have never happened yet thus being ‘a contradiction of the laws of nature ever observed by man’, that it was promised by the truth word of god who never lies just as ‘how much more easier is to accept the resurrection of the spiritual body as another common operation of nature when we consider those endless miracles of ears of wheat coming from a grain or an oak from an acorn’ and finally that ‘all the ablest intellects have always believed in god’ so that they cannot possibly be all wrong, an echo of Convivio II: 9 with ‘Dico che intra tutte le bestialitati quella è stoltissima, vilissima e damosissima, chi crede dopo questa vita non essete altra vita; però che, se noi rivolgiamo tutte le scritture, si de’ filosofi come de li altri savi scrittori, tutti concordano in questo, che in noi sia parte alcuna perpetuale.’, or even more impossible ‘they suppose that all the great, virtuous, and exalted minds, that have ever existed, or that may exist for some thousands, perhaps millions of years, will be sunk in annihilation; and that only a few beings, not greater in number than can exist at once upon the earth, will be ultimately crowned with immortality’ being unthinkable to him that people actually die by the pure argument of his belief that they cannot possibly be lost forever instead of being there waiting to meet him in the spiritual world where they will be gifted with an eternal bliss that so pitifully they neither understand nor have built it themselves as the product of their work and genius but simply given by the magical deity as reward for properly enduring his torture in this world.

He takes a long part of his work in ‘disproving evolution’; although Darwin was not even born yet. He goes on about how species have some variation and how we have created many much bigger than found in nature by careful care and the artificial selection of breeding; he saw that the mutability of the species changing into others was a consequence of those admitted facts, and his ‘argument’ against it was merely that ‘it would be absurd if a flower could grow to the size of a cabbage or a rat to that of a bull’ and the like – saying driven by pure baseless faith and arguing solely by the strength of his conviction that ‘it cannot be’ and therefore his god certainly had put some limit to keep every species within boundaries.

Although that was evoked simply as an analogy, not believing that someone would dare to say that the ‘species’ would progressively change without limits, of how humans were then likewise stagnant by divine will ‘under the mercy of nature’ and the perfecting of man would only happen in his fantasy world of the afterlife; on the other hand the hope of the continual improvement of mankind by Condorcet, and his denunciation of the vile doctrines which oppose it, is one of the most beautiful sentiments, and one of so immense utility, to the future of humanity, although imprecise and simplistic in his sketch of history.

Bacon was also a cultist with his mind ruled by the very same Teather Idol, but how much more advanced was the disease in Malthus when compared to the scientific statements of Bacon: “Upon inquiring about something one must seek how it initiates, in what mode, by which process, and how are generated the metals of the earth and the herbs or how by seeds are formed the plants by means of a succession of motions and how nature with a diverse and continuous motion forms the animals and all else.”.

That is, the true terror of Malthusian pessimism is his preconceived beliefs which doomed its believers to forever suffer the ‘inevitable tragedies of nature’; that we should just accept the fate of our health or of the ‘invincible’ ‘nature’ – not the terror ‘unfounded because he failed to predict the industrial revolution’, but that he did fail to do so exactly because of his belief in fairy tales that led him to deny all science and progress since we are in eternal submission to the ordeals from his psychopathic deity.

“What is sent by the gods, we must bear.”

Rather it is our sole aim to get rid of those linked thunderbolts that transfix us to the bottom of this gulf; to awake and arise, otherwise we will be thus for ever fallen in our ignorance and misery.⁴⁶

Nowadays we have knowledge about cells which compose every living being and the exact mechanical molecular processes that cause life; that ‘disease’ and ‘death’ is nothing more than some error and disturbance which hinders these processes to happen – just as the growing of plants in indeed encoded entirely within the seed, with gigantic space to spare, and that part of its elementary building blocks, as nitrogen mainly on that example, are found in fertilizers allow it to easily develop.

But remember our goal; it is not to brute force or to ‘prove’ that one specific case was right or wrong by making both inferences of logic and pure belief redundant in the face of observational

“At secundum genus axiomatis (quod a latentis processus inventionem pendet) non per naturas simplices procedit, sed per concreta corpora, quemadmodum in natura inveniuntur, cursu ordinario. Exempli gratia; in casu ubi fit inquisitio, ex quibus initiis, et quo modo, et quo processu, aurum aut aliud quodvis metallum aut lapis generetur, a primis menstruis aut rudimentis suis usque ad mineram perfectam; aut similiter, quo processu herbae generentur, a primis concretionibus succorum in terra, aut a seminibus, usque ad plantam formatam, cum universa illa successione motus, et diversis et continuatis naturae nixibus; similiter, de generatione ordinatim explicata animalium, ab initu ad partum; et similiter de corporibus aliis.”

– Novum Organum Duo V.

⁴⁶ “Or have ye chosen this place
 After the toil of battle to repose
 Your wearied virtue, for the ease you find
 To slumber here, as in the vales of Heaven?
 [...]
 [...] or with linked thunderbolts
 Transfix us to the bottom of this gulf?
 Awake, arise, or be for ever fallen!”
 – Paradise Lost I: 318-321, 328-330.

certainty – the goal it is justifying why, even without such modern ‘proof’, we could, even in ignorance of reality, take one side or the other.

Even with all grace giving the status of ‘sufficient’ to all we could still judge one as ‘good’ and other as ‘bad’; and we could see that some were plainly ‘bad’ and admitting ignorance of any explanation would be the better choice than some meaningless ‘answer’ that provides no ‘understanding’.

These considered now, however, were of a different kind than the merely superior logical reduction of René.

They did not deal with some specific phenomenon or even provided an ‘answer’ to something already known.

If we adopt that beautiful assertion of Hippocrates, does it answer us what cancer is? Or what tuberculosis is? Covid has raged on all around me due to our filthy political system, but does Hippocrates answer us what Covid is? Does he provides us with the said ‘understanding’; which leads to knowledge which is power – can we treat then Covid with his theory and solve the question?

To all of those he would simply repeat the statement; ‘it has a natural cause’. It does not give us knowledge, really, but it differs from the divine attributions and beliefs because it affirms quite the opposite of them; it is not a dead-end and justification for ignorance by placing it into the realm of the unknowable – instead it spurs us forth to go there and find that cause.

It does not accommodate, but leads us to understanding.

It is truly ‘science’; the pursuit of knowledge. Perfectly opposed to the belief in the unknowable; which doctrine of uncertainty is not only detrimental to our pursuit of truth, but to our very wellbeing as it chains us to stagnation hindering all progress.

It is much more abstract and un-provable than some specific answer, as that of René, but it is also much more powerful; indeed it is a generalization of our method and it leads to the exact description of reality as we go on the discovery of the specific processes involved.

With this generalization of how to go in deeper and even without the exact description provide a perfectly good theory let us investigate on in how the assumption of the exact method is the ‘right’ choice in the face of the uncertain or un-provable; how it is indeed the only choice we can take for it is the only that leads to the best eventual result – I will now go on justifying something ubiquitously accepted by all science, rather than discussing on why something is denied, so enjoy

the subject you most certainly must be very familiar with and that most exemplifies the ‘debate’ of ‘science versus religion’ today.

III – The History Of Nature

It is impossible to convey how knowledgeable Aristotle was concerning the anatomy of so many animals and their behaviours to someone who has not spent days reading his hundreds of pages on the theme.

He described the radula of octopuses and how it was perfectly adapted for its prey and the hole on the shells were made with so much precision that they could always be found on the same place and show that they were eaten by an octopus; just as he described the five tooth and interior of sea urchins – and how whales and dolphins differed too much to be classed as fish.

And so he went on how the animals moved and classing them all based on that; on how animals reproduced, and classing them all based on that – on their bodily structures, habit, environment and longevity as means of characterizing them in groups.

During the entire time I was saddened as I wondered why did he not produce a microscope; lenses were already known and it was so possible. What wonderful descriptions could he produce if he observed cells and the entire biota literally under, and all around, his nose; and besides such observations that could surpass Leeuwenhoek, what would he theorize and use to explain all those structures and organelles present through all life?

It was as interesting as sad to think about that which never happened; and how after dedicating so much of his life to learning about the natural world he died in ignorance of the most ubiquitous and fundamental living things.

He observed that as a boat came from somewhere else it had to be washed thoroughly, otherwise the mud that it brought ‘would spontaneously generate the different kind of clams from that other area and become a pest’; he literally described nature as a battleground between every species and rather than in balance they were in fierce competition – and he gives us not only the common understanding of heredity, but even of atavism of how a trait cannot appear on the direct offspring only to appear later on.⁴⁷

⁴⁷ “Γίνονται δὲ καὶ ἐξ ἀναπήρων ἀνάπηροι, οἷον ἐκ χωλῶν χωλοὶ καὶ τυφλῶν τυφλοί, καὶ ὅλως τὰ παρὰ φύσιν ἐοικότες πολλάκις, καὶ σημεῖα ἔχοντες συγγενῇ, οἷον φύματα καὶ οὐλὰς. Ἦδη δ' ἀπέδωκε τῶν τοιούτων τι καὶ διὰ τριῶν, οἷον ἔχοντός τινος στίγμα ἐν τῷ βραχίονι ὁ μὲν υἱὸς οὐκ ἐγένετο ὁ δ' υἱοῦς ἔχων ἐν τῷ αὐτῷ τόπῳ συγκεχυμένον μέλαν.

Ὀλίγα μὲν οὖν γίνεται τὰ τοιαῦτα, τὰ δὲ πλεῖστα γίνεται ὁλόκληρα ἐκ κολοβῶν, καὶ οὐδὲν ἀποτέτακται τούτων. Καὶ ἐοικότες δὲ τοῖς γεννήσασιν ἢ τοῖς ἀνωθεν γονεῦσιν, ὅτε δ' οὐδὲν οὐδενί. Ἀποδίδωσι δὲ καὶ διὰ πλειόνων γενῶν, οἷον ἐν Σικελίᾳ ἢ τῷ Αἰθίοπι μοιχευθεῖσα· ἡ μὲν γὰρ θυγάτηρ ἐγένετο οὐκ Αἰθίοψ, τὸ

Perhaps he would see the eggs on the mud, but even then if he could not suppose the existence of eggs he probably would just move the supposition of spontaneous generation to those smaller beings, as he postulated that those magical muds from each place were the work of the gods and when that competition lead to the extinction of some animal it would be repopulated by the same divine power that made them⁴⁸; heredity was a mere curiosity and to him all that competition,

δ' ἐκ ταύτης.”

- Τὸν Περί τα Ζῷα Ιστοριῶν, About The History of Animals, VII: 6, where he is indeed wrong in the case of the mutilation, but notices true atavism of how the son of a black man and a white woman was white while the son of that white was black.

“Αἱ δ' αὐταὶ αἰτίαι καὶ τοῦ τὰ μὲν εἰκότα γίγνεσθαι τοῖς τεκνῶσασιν τὰ δὲ μὴ εἰκότα, καὶ τὰ μὲν πατρὶ τὰ δὲ μητρὶ κατὰ τε ὅλον τὸ σῶμα καὶ κατὰ μέρη ἕκαστον, καὶ μᾶλλον αὐτοῖς ἢ τοῖς προγόνους, καὶ τούτοις ἢ τοῖς τυχοῦσι, καὶ τὰ μὲν ἄρρενα μᾶλλον τῷ πατρὶ τὰ δὲ θήλεα τῇ μητρὶ, τὰ δ' οὐθενὶ τῶν συγγενῶν ὁμῶς δ' ἀνθρώπῳ γέ τι, τὰ δ' οὐδ' ἀνθρώπῳ τὴν ἰδέαν ἄλλ' ἤδη τέρατι. καὶ γὰρ ὁ μὴ εἰκὼς τοῖς γονεῦσιν ἤδη τρόπον τινὰ τέρας ἐστίν· παρεκβέβηκε γὰρ ἡ φύσις ἐν τούτοις ἐκ τοῦ γένους τρόπον τινά.”

- Περί ζώων γενέσεως, About The Generation of Animals, IV: 3, he describes as a son looks very much like his parents and a little less as his grandparents and a little less still to his great grandparents, but still much closer to them than to some unrelated stranger; although he insanely denies the biological transfer of such information, as the semen theory of Democritus, and rather says that the only explanation is that their life-force and soul carries on those inheritable factors.

⁴⁸ I do not talk nearly enough of our long history of 'spontaneous generation'; so let me leave here the most masterful description of such as given by Della Porta:

“Diodorus, & cum eo no pauli momenti Philofophantes aiunt, animália omnia ex putrefactione orta esse: nam cælo, terra, & elementis in mundi primordio in suis locis receptis, terra in multis locis lutofa, & mollis derelicta, a Solis radiis percussa, exiccataque, in superficie tumores quosdam produxit, in quibus particulatim putredines fovebantur, pelliculis quibusdam intectæ, que intrafe putrem materiam illam continebant, noctuque roribus humectaræ, ac sic Solibus concalefactæ, iusto tempore ad maturitatem productæ sunt, confractisque utriculis, omnium animantium genera exclusa sunt, quorum quæ maiorem calorem fortiora sunt, aves enascuntur, quæ terram, reptilia, quæ plus aquæ, pisces in mari nantes, & inter hec media per terram pedibus ambulantes. Sed quotidie Sole terram calefaciente: non amplius animalia produxit, fed producta mutuo congressa sibi familia produxerunt.”

- Magiæ Naturalis II: 1.

His countryman Francesco hit hard against those ideas, and much later Pasteur, with his meat experiments not allowing maggots to grow on it, but both sharing the same sick religion he said the equally, or even more, wrong line that 'omne vivum ex vivo', that all living things come from living things; when actual that goes against the Hebrew myths they worshipped, since they share the same ancient scientific view, as the famous enigma made by the last judge, Samson, about 'food produced from the eater, sweet produced from the brave' where it was a common belief that bees would be spontaneous generated by carcasses – as remarked by

variability and inheritance were of no real consequence – and their perfect bodily structures and behaviours was just ‘more proof’ of the gift of the gods so intelligently designing each being for its ‘function in nature’ eternally unchangeable as everything had been made.⁴⁹

Aristotle after such a long and accurate description of the complex bee society and behaviour, and as the very name of ‘bee’ in Greek, ‘bosgeneia’ or ‘generated from the bull’.

Now; the generation from the non-living is the reality, as we will next go in detail, and what invalidates all such ‘ideas’ is their baseless invention without the logical requirement to be even considered acceptable; as if that ‘inorganic putrefaction’ that generated life, as used by Della Porta above, were rather describe as the runaway chemical reaction of life – that indeed the elements putrefied since only on the death of the first stars as their hydrogens rot into the metals that form stellar dust for the formation of planets, just as our metallic star is the nuclear reactor of life that both formed and maintain the conditions for life here.

⁴⁹ “ἀλλ’, ὦ Σώκρατες, ἔφη, οὐ φθονήσω: ἀλλὰ πότερον ὑμῖν, ὡς πρεσβύτερος νεωτέρους, μῦθον λέγων ἐπιδείξω ἢ λόγῳ διεξελλθών;

πολλοὶ οὖν αὐτῷ ὑπέλαβον τῶν παρακαθημένων ὅποτερός βούλοιτο οὕτως διεξίεναι. δοκεῖ τοίνυν μοι, ἔφη, χαριέστερον εἶναι μῦθον ὑμῖν λέγειν.

ἦν γάρ ποτε χρόνος ὅτε θεοὶ μὲν ἦσαν, θνητὰ δὲ γένη οὐκ ἦν. ἐπειδὴ δὲ καὶ τούτους χρόνος ἦλθεν εἰμαρμένους γενέσεως, τυποῦσιν αὐτὰ θεοὶ γῆς ἔνδον ἐκ γῆς καὶ πυρὸς μείξαντες καὶ τῶν ὅσα πυρὶ καὶ γῇ κεράννυνται. ἐπειδὴ δ’ ἄγειν αὐτὰ πρὸς φῶς ἐμελλον, προσέταξαν Προμηθεὶ καὶ Ἐπιμηθεὶ κοσμήσαι τε καὶ νεῖμαι δυνάμεις ἐκάστοις ὡς πρέπει. Προμηθεὶ δὲ παραιτεῖται Ἐπιμηθεὺς αὐτὸς νεῖμαι, ‘νείμαντος δέ μου,’ ἔφη, ‘ἐπίσκειναι.’ καὶ οὕτω πείσας νέμει. νέμων δὲ τοῖς μὲν ἰσχὺν ἄνευ τάχους προσῆπτεν, τοὺς δ’ ἀσθενεστέρους τάχει ἐκόσμει: τοὺς δὲ ὀπλιζε, τοῖς δ’ ἄοπλον διδοὺς φύσιν ἄλλην τιν’ αὐτοῖς ἐμηχανᾶτο δύναιμι εἰς σωτηρίαν. ἃ μὲν γὰρ αὐτῶν σμικρότητι ἤμπισχεν, πτηνὸν φυγὴν ἢ κατάγειον οἰκησιν ἔνεμεν: ἃ δὲ ἡῤῥε μεγέθει, τῷδε αὐτῷ αὐτὰ ἔσφωεν: καὶ τᾶλλα οὕτως ἐπανισθῶν ἔνεμεν. ταῦτα δὲ ἐμηχανᾶτο εὐλάβειαν ἔχων μὴ τι γένος αἰστωθεῖη: ἐπειδὴ δὲ αὐτοῖς ἀλληλοφθοριῶν διαφυγὰς ἐπῆρκεσε, πρὸς τὰς ἐκ Διὸς ὥρας εὐμάρειαν ἐμηχανᾶτο ἀμφιεννὺς αὐτὰ πυκναῖς τε θριξίν καὶ στερεοῖς δέρμασιν, ἱκανοῖς μὲν ἄμυναι χειμῶνα, δυνατοῖς δὲ καὶ καύματα, καὶ εἰς εὐνὰς ἰοῦσιν ὅπως ὑπάρχοι τὰ αὐτὰ ταῦτα στρωμνὴ οἰκεῖα τε καὶ αὐτοφυῆς ἐκάστω: καὶ ὑποδὼν τὰ μὲν ὀπλιᾶς, τὰ δὲ θριξίν καὶ δέρμασιν στερεοῖς καὶ ἀναίμοις, τοῦντεῦθεν τροφὰς ἄλλοις ἄλλας ἐξεπόριζεν, τοῖς μὲν ἐκ γῆς βοτάνην, ἄλλοις δὲ δένδρον καρπούς, τοῖς δὲ ῥίζας: ἔστι δ’ οἷς ἔδωκεν εἶναι τροφὴν ζῶων ἄλλων βοράν: καὶ τοῖς μὲν ὀλιγογονίαν προσῆψε, τοῖς δ’ ἀναλίσκομένοις ὑπὸ τούτων πολυγονίαν, σωτηρίαν τῷ γένει πορίζων. ἅτε δὴ οὖν οὐ πᾶν τι σοφὸς ὢν ὁ Ἐπιμηθεὺς ἔλαθεν αὐτὸν καταναλώσας τὰς δυνάμεις εἰς τὰ ἄλογα: λοιπὸν δὴ ἀκόσμητον ἔτι αὐτῷ ἦν τὸ ἀνθρώπων γένος, καὶ ἡπόρει ὅτι χρήσαιο. ἀποροῦντι δὲ αὐτῷ ἔρχεται Προμηθεὺς ἐπισκεψόμενος τὴν νομὴν, καὶ ὁρᾷ τὰ μὲν ἄλλα ζῶα ἐμμελῶς πάντων ἔχοντα, τὸν δὲ ἀνθρώπον γυμνὸν τε καὶ ἀνυπόδητον καὶ ἄστροτον καὶ ἄοπλον: ἦδη δὲ καὶ ἡ εἰμαρμένη ἡμέρα παρῆν, ἐν ᾗ ἔδει καὶ ἀνθρώπων ἐξίεναι ἐκ γῆς εἰς φῶς. ἀπορία οὖν σχόμενος ὁ Προμηθεὺς ἦντινα σωτηρίαν τῷ ἀνθρώπῳ εὔροι, κλέπτει Ἡφαίστου καὶ Ἀθηνᾶς τὴν ἐντεχνον σοφίαν σὺν πυρὶ—ἀμῆχανον γάρ ἦν ἄνευ πυρὸς αὐτὴν κτητὴν τῷ ἢ χρησίμην γενέσθαι—καὶ οὕτω δὴ δωρεῖται ἀνθρώπῳ. τὴν μὲν οὖν περὶ τὸν βίον σοφίαν ἀνθρώπος ταύτῃ ἔσχεν, τὴν δὲ πολιτικὴν οὐκ εἶχεν: ἦν γὰρ παρὰ τῷ Δίῳ. τῷ δὲ Προμηθεὶ εἰς μὲν τὴν ἀκρόπολιν τὴν τοῦ Διὸς οἰκησιν οὐκτε ἐνεχώρει

He talks about how there are too many seeds and eggs so that it would be impossible for them all to germinate and grow, be it for the lack of space or of food; and so they are ‘at war’ not only against as on the pursuit of prey and the defences against the hunter, but also the inter-species competition for resources that lead to ‘the motivation of each other to always strive at their utmost’⁵⁰ – all that just strengthen his faith as the divided hoof of animals were found on those with horns as the way that nature maintains balance by taking material from one part in order to fashion another and just as only birds have extreme vision and terrestrial animals do not nature does nothing in vain, but gives every characteristic for a purpose as the horns for defence and the vision to see from far above.

He saw there was no ‘perfect balance’ as some static immutable nature, but that it was a dynamic equilibrium; and then the thought that the equilibrium could be permanently upset so as to select other strategies as optimal was unbearable so that he cast the gods as the sadistic designers of that

εἰσελθεῖν—πρὸς δὲ καὶ αἱ Διὸς φυλακαὶ φοβεραὶ ἦσαν—εἰς δὲ τὸ τῆς Ἀθηνᾶς καὶ Ἡφαίστου οἶκημα τὸ κοινόν, ἐν ᾧ ἐφιλοτεχνεῖτην, λαθὼν εἰσέρχεται, καὶ κλέψας τήν τε ἔμπυρον τέχνην τὴν τοῦ Ἡφαίστου καὶ τὴν ἄλλην τὴν τῆς Ἀθηνᾶς δίδωσιν ἀνθρώπῳ, καὶ ἐκ τούτου εὐπορία μὲν ἀνθρώπῳ τοῦ βίου γίγνεται,

Προμηθεῖα δὲ δι’ Ἐπιμηθεῖα ὕστερον, ἥπερ λέγεται, κλοπῆς δίκην μετῆλθεν.

ἐπειδὴ δὲ ὁ ἄνθρωπος θείας μετέσχε μοίρας, πρῶτον μὲν διὰ τὴν τοῦ θεοῦ συγγένειαν ζώων μόνον θεοὺς ἐνόμισεν, καὶ ἐπεχείρει βομούς τε ιδρύεσθαι καὶ ἀγάλματα θεῶν: ἔπειτα φωνὴν καὶ ὀνόματα ταχὺ διηρθρώσατο τῇ τέχνῃ, καὶ οἰκῆσεις καὶ ἐσθῆτας καὶ ὑποδέσεις καὶ στρωμνὰς καὶ τὰς ἐκ γῆς τροφὰς ἡὔρετο.”

– Πρωταγόρας, Protagoras, 320γ-322ε, where his master shows his usual inhuman artistry with such beautiful description, or it would be if such was kept on the realm of fantasy not so unhappy and detrimental to all of humankind as the creationist mindlessness it is.

⁵⁰ “εἰς ἕτερον γάρ τις τε ἰδὼν ἔργοιο χατίζων
πλούσιον, ὃς σπεύδει μὲν ἀρώμεναι ἢ δὲ φυτεύειν
οἶκόν τ’ εὖ θέσθαι, ζηλοῖ δὲ τε γείτονα γείτων
εἰς ἄφενος σπεύδοντ’ • ἀγαθὴ δ’ Ἔρις ἦδε βροτοῖσιν.
καὶ κεραμεὺς κεραμεῖ κοτέει καὶ τέκτονι τέκτων,”

– Ἔργα καὶ Ἡμέραι, Works and Days, 19-24, which describes how a hard working farmer motivates the others to not be lazy; and that the greatest enemy of potters are potters, of artists artists, of beggars beggars and of singers singers’, which Aristotle just loves to repeat and present that inter-species competition as the means that things are always improving and ‘laziness kept at bay’. And how wilfully blind of him to not apply it to the natural world and the inheritance principles he already knew.

Hesiod, about two thousand and seven hundred years ago. He wrote about the seasons, way of planting and economic behaviour in society; even about the familiar relations of the gods and the ancient mystical ages of humankind, leaving for posterity those early traditions.

eternal struggle³¹ since it was beyond him to think the extinction and production of ‘species’ to exist.

We can see that rather than questioning such links or even ‘what is a species’ he instead just moulded everything to his preconceived world views; rather than knowledge, and its power, or any explanation it sufficed to ‘justify’ by attributing it all to some divine power – indeed any questioning of his faith showed that the other party ‘was not in need of being taught, but of punishment’.³²

He would not try to align his beliefs with the truth, but distort the world to defend his notions.

He would go crazy with excitement in seeing the organization of the vessels of trees and how climate so greatly affects their size, structure and growth rate; and how pleased with himself he would be in the fun of extending what that implied to animals – as the latitudinal racism was extremely strong with the European Mediterranean being the centre of the world and best place for development in contrast with ‘the dumb barbarians of the north’ and ‘the sickly cowards of the south’ as both ‘too much cold’ and ‘too much heat’ produced those characteristics.

So easy to perfectly align it with his beliefs.

So too in analysing weevils it would be impossible to not see the tiny eggs and that they indeed developed from them as maggots and then to the insect rather than by spontaneous generation, but watching them he would see that some grains had been mostly eaten before the egg was laid or the hole made in the husk too large so that those deposited there would not survive; while when properly laid it was clear ‘the admirable faculties and powers they were endowed with to answer the purpose of their creation’ since their long powerful proboscis is furnished with pincers that enable them to bore a small and deep hole in the grain of wheat so that they can deposit the egg – since the maggot laid outside of the grain could never pierce the strong husk and if more than one egg were laid there would not be enough food so that they would hinder each other’s growth in the lack of nourishment, combined with the very little power of mobility of such

³¹ “I cannot persuade myself that a beneficent & omnipotent God would have designedly created the Ichneumonidae with the express intention of their feeding within the living bodies of caterpillars”
– Robert in one of his most famous letters.

³² “Οὐ δεῖ δὲ πᾶν πρόβλημα οὐδὲ πᾶσαν θέσιν ἐπισκοπεῖν, ἀλλ’ ἥν ἀπορήσειεν ἄν τις τῶν λόγου δεομένων καὶ μὴ κολάσεως ἢ αἰσθήσεως· οἱ μὲν γὰρ ἀποροῦντες « Πότερον δεῖ τοὺς θεοὺς τιμᾶν καὶ τοὺς γονεῖς ἀγαπᾶν ἢ οὐ » κολάσεως δέονται, οἱ δὲ « Πότερον ἡ χιὼν λευκὴ ἢ οὐ » αἰσθήσεως.”
– Τοπικά, Topics, I: 12.

maggots so that they are clearly designed by nature to feed and develop nowhere else but in the inside grains.⁵³

Of course, contrary to the wild jump of logic from the Dutch man, Aristotle would be well aware that it merely shows that at least *some* weevils can reproduce by using eggs, but being able to do something does not disprove or assert anything about not being able to do something else, as spontaneously appearing or having several means of reproduction; both could very well happen – and all he saw would just strength his amazement at that perfect divine wisdom which made such design.

The amazement and seemingly infinite complexity would just create more awe towards the unknown; the apparent unachievable knowledge to conceive the minuteness of the vessels and component parts which not only animals, but also vegetables, are formed of and much less how parts of matter are thus united together or how one part grows out of or is added to another.

But how long could that amazement and wilful blindness last before the reality before him? If he had both the time and tools to observed it deeply as the collective efforts of humankind nowadays made it possible for us to know; he described the curious physiological and behavioural changes of many different animals that had undergone castration, would he be happy in finding out hormones and peering into the works of the gigantic biological machinery? Or would the investigation of the grand biological machinery show that his beliefs held as much weight and substance as smoke or vapour; promptly vanishing in the wind – for the production of the chemical pathways that make a shellfish to come from the inert silica oxide would seem quite as impossible as a whale being born from glass or rocks, and likewise would not their origin and descent be undeniable thus shattering his preconceived notions?

He described human anatomy, but how would he react to see over time a new artery becoming much more common on the new generations; or a trend to smaller mandibles where on the older bones show a larger one that could perfectly fit the last teeth – or how the very musculature was changing throughout time since the groves and attachment points of the muscles on the bones were clearly, and gradually, different.

Or how could he deal with noticing that more people were being born without a palmar muscle; and that besides that one many more tiny muscles were present around the head and body for no function – and how on the neck a very small percentage of individuals he could find a muscle from the neck vertebrae to the clavicle; and many such ‘rare muscles’ running mostly on some specific family.

⁵³ These are the observations and conclusions of Leeuwenhoek against the spontaneous generation of Weevils.

He knew the law of inheritance to justify why and perhaps would say some birth defect and abnormality on some of their progenitor passed on like that, but most likely he would flee to the safe haven of irresponsible ignorance; after all, who are we to question the works of the gods? So infinitely superior to us it would be foolish of us to based on our limited intellect to say those things have no function; the mysterious of the gods are simply too complex for us to grasp – and unthinkable that there would ever truly be a mistake of their parts or for the perfect natural laws that keep everything in balance to ever do something superfluous.⁵⁴

⁵⁴ “ΣΤΡΕΨΙΑΔΗΣ

Ἀλλ’ ὁ κεραυνὸς πόθεν αὖ φέρεται λάμπων πυρί, τοῦτο
 δίδαξον,
 καὶ καταφρῦγει βάλλων ἡμᾶς, τοὺς δὲ ζῶντας περιφλεύει.
 Τοῦτον γὰρ δὴ φανερώς ὁ Ζεὺς ἴησ’ ἐπὶ τοὺς ἐπίορκους.

ΣΩΚΡΑΤΗΣ

Καὶ πῶς, ὦ μῶρε σὺ καὶ Κρονίων ὄζων καὶ βεκεσεῖληνε,
 εἴπερ βάλλει τοὺς ἐπίορκους, δῆτ’ οὐχὶ Σίμων’ ἐνέπρησεν
 οὐδὲ Κλεώνυμον οὐδὲ Θέωρον ; Καίτοι σφόδρα γ’ εἶς’ ἐπίορκοι.
 Ἀλλὰ τὸν αὐτοῦ γε νεὼν βάλλει καὶ Σούνιον, ἄκρον Ἀθηνέων,
 καὶ τὰς δρυὺς τὰς μεγάλας, τί μαθὼν ; Οὐ γὰρ δὴ δρυὺς γ’ ἐπίορκεῖ.”

– Νεφέλαι, *The Clouds*, where Aristophanes jokes about the logic of Socrates; a general man speaks the faith and ‘truth that everyone knows’ that lightning are thrown by Zeus at perjurers, but then Socrates asks then why has no such and such not been stricken yet since there can be no greater perjurers than them, and further why he strikes his own temple, the promontory of Athens or large oaks because certainly an oak is no perjurer.

This is posed as a joke so that Aristophanes does not even deign to provide a reply; the character does not provide a counter-theory of what lightning is, or rather presents a joke to what they are, and rather than useful admittance of ignorance and inquisitiveness Aristophanes take the worthless magical ‘answer’ – his argument is clear as he mocks the very attempt to question the unquestionable and doubt that which is too high beyond human intellect to be sounded.

“What authority have we ignorant mortals then to judge who is or not just? On the contrary the gods are the ones who know all; and what if the presence of the tree were to block the wind and to diverge the rectitude of the course of the divine arrow? And what if from the protection of its canopy were to appear voracious insects to devour the fruits of the flowers of myrtle which would be to philomeidic *Aphrōdithi* or if it were to deprive the olives of *Apōllonōs* from their light and nutrition bringing war on the world of men? And if its root were to make a hero to trip? Should we not pull out and throw away our eye or hand or foot not when it is already too late, but when they potentially are that which they will come to be? How much more than is a plant to be thrown away; and what sin is greater than to hindering the will of the gods to come into fruition!?”

– I explicitly present it in *Kaiho 1: ㊦: XIII: θ ‘β*.

That is what I say Aristotle would argue too when presented with any ‘useless structure’ that could defy his notions of ‘the perfect work of nature; everything for a purpose and nothing superfluous’.

It might seem I am going really sidetrack and just trashtalking religions; and going on about some that does not even exist anymore, but I merely present the formula and reasoning for questioning it on such well accepted grounds so that we may also question why we apply it so partially and do not question the exact same logic still being used today.

“The lightning kills a man, whether a good one or bad one, owing to the excessively complex action of natural laws,—a child (who may turn out an idiot) is born by action of even more complex laws,—and I can see no reason, why a man, or other animal, may not have been aboriginally produced by other laws; & that all these laws may have been expressly designed by an omniscient Creator, who foresaw every future event & consequence. But the more I think the more bewildered I become; as indeed I have probably shown by this letter.”

– To Asa Gray 22 May [1860], one of the most famous letters of Robert; where he uses lightning as such well accepted idea at his time that it is an example that the ‘natural causes’ of life are to be accepted on the exact same logical grounds.

Although the Christians who fought it also fought against putting a lightning rod since they had to blindly accept the unquestionable ‘truth’ of their faith; just as they refused to look through the telescope of Galillei – and although the reader that got to this point should have at least the most basic scientific mind that abhors to even consider all such baseless nonsense of the religions as ‘arguments’, such beliefs are still the most popular on his ignorant world.

“وَاللَّهُ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَسْمَعُونَ”

– قرآن، Quran, XVI: 65, proclaims that rain is the work of the divine and a blessing to his servants proving his power and compaxion.

هُوَ الَّذِي يُرِيكُمْ الْبَرْقَ خَوْفًا وَطَمَعًا وَيُنْشِئُ السَّحَابَ الثَّقَالَ وَيُسَبِّحُ الرَّعْدُ بِحَمْدِهِ وَالْمَلَائِكَةُ مِنْ خِيفَتِهِ وَيُرْسِلُ الصَّوَاعِقَ فَيُصِيبُ بِهَا مَنْ يَشَاءُ “وَهُمْ يُجَادِلُونَ فِي اللَّهِ وَهُوَ شَدِيدُ الْمِحَالِ”

– قرآن، Quran, XIII: 12-13, says that lightning are the work of their god to show his power and threaten the wicked.

“ὁρᾷς τὰ ὑπερέχοντα ζῶα ὡς κεραυνοῖ ὁ θεὸς οὐδὲ ἐξ φαντάζεσθαι, τὰ δὲ σμικρὰ οὐδὲν μιν κνίζει· ὁρᾷς δὲ ὡς ἐς οἰκήματα τὰ μέγιστα αἰεὶ καὶ δένδρεα τὰ τοιαῦτα ἀποσκοπτεῖ τὰ βέλεα· φιλέει γὰρ ὁ θεὸς τὰ ὑπερέχοντα πάντα κολούειν. οὕτω δὲ καὶ στρατὸς πολλὸς ὑπὸ ὀλίγου διαφθείρεται κατὰ τοῖονδε· ἐπεάν σφι ὁ θεὸς φθονήσας φόβον ἐμβάλῃ ἢ βροντήν, δι’ ὧν ἐφθάρησαν ἀναξίως ἐωυτῶν. οὐ γὰρ ἐξ φρονέειν μέγα ὁ θεὸς ἄλλον ἢ ἐωυτόν.”

– Ιστορίαι, Histories, VI: 10, where so hilariously Herodotus so says how god strikes the tallest animals that stand above the rest while not touching the small ones just as he strikes the tallest buildings and the tallest trees while leaving the small ones untouched; to him not any geometrical necessity of some mundane ‘laws of nature’, but the absolute proof that god thus hates and destroy that rich and prideful due to his love to the humbles one whom he will later exalt. Reality is bent at his whim to not only fit, but support, his beliefs.

But then at studying the anatomy of monkeys he might notice the bones are slightly different, but quite analogous to that of humans; and that the neck-to-clavicle muscle so rare in humans is present ubiquitously on the apes – and many other non-functional and so underdeveloped or rare in man are perfectly developed and functional in the apes.

Studying it more carefully he could see the ontogeny of the foetus growing to the adult animal; that it was quite points, in both cases, to ask ‘how many bones does the body have?’ since the baby would have many more that fused during development – and rather than some exact body plan each varies slightly and during their lives go on fusing and changing in number all the way until death.

He could test that any harm done to the very zygote or during the many phases of development would cause great failures on the organism later; that it was a mechanical processes depending on the equilibrium and organization of the particles within rather than some pre-defined plan made by some outside force – with a real good microscope and capacity to analyses the processes he would see that the cells have nucleus from which all exact sequence all proteins are produced to form every and each structure on the body. And that it divided and formed the reproductive cells; which offspring inherited a part from both parents – and that messing with that code would change the development of the being.

He could identify that those apes and those rare humans with the muscle had a same gene that was lacking on most; and only those families had it because it was passed on to their offspring.

He would see that the many anomalous monstrosities that sometimes appear are not some plague from the gods cursing that body, but some rare genes that managed to come together without a dominant one so that it manifested from its forgotten place on the genome; a gene found commonly on other animals.

When giving up on all logic the common argument is such of absolute irrational fate; where questioning is forbidden since the divine is simply incomprehensible to our limited and failed logic so that we must blindly accept the unjustifiable and detrimental. I say it here so thoughtly on such solved questions to present the deficient logic of it and how even before the brute force of studying the phenomena we could judge their ‘argument’ as worthless; and I will bring this up again when considering the very core of our modern Physics since that is the main argument the proponents of Quantum so madly love to repeat belittling the very notion of sciences and our judged to just blindly accept that unjustifiable higher power beyond our comprehension.

“ἀλλ’ ὡς ἀπέχει ὁ οὐρανὸς ἀπὸ τῆς γῆς, οὕτως ἀπέχει ἡ ὁδὸς μου ἀπὸ τῶν ὁδῶν ὑμῶν καὶ τὰ διανοήματα ὑμῶν ἀπὸ τῆς διανοίας μου.”

– Ησαΐας, Isaiah, LV: 9, where the most famous sum of the argument can be found; ‘as the heaven is higher than the earth, so are his thoughts than ours’.

He could then classify the animals by how different their genes were; not only the appearance that all monkeys seem to belong to a same group, but even supposed how close or distant they are based on how different their code is.

He would see that not only monkeys looked a lot like humans, but that every other mammal was built on the same general model; be it a monkey, a flying bat or a giant whale – the very same complex hand of useless fingers inside the whale arm was stretched and deformed to form the wing of the bat and to construct the hand of the monkey, followed by the metacarpal and carpal parts before the forearm of the same two radius and ulna bones to then the same single humerus and mammalian shoulder.

How different from fish was such hand and the unique shoulder presents only in mammal, rather than judging by their blood; and how indeed they all shared genes unique to mammals that grouped them all closer to each other than to all other animals – so that the reptiles indeed have analogous hands and arms, but are separated from all mammals by that shoulder.

And by their maxilar made of so many bones when we mammals have a single large one and the genes related to the mandible on reptiles have changed to form our complex ear instead; and how very chilling that unearthing fossils show distinct intermediary states of animals of changing legs placement, from the side of the body like reptiles to be below like mammals, and migrating mandible bones – so that it is instantaneously recognized as a mammal fossil from such unique characteristics of the group even without looking at the double fenestral hole on their skull which reptiles have a single one.

How very uncanny would be to study the horse that is so clearly a mammal with the same complex ear from the mandible bones and the same milk producing genes, but that it stood on a single digit rather than the common hand that even whales have; and then to see that the foetus indeed has several bones and the genes coding for them, but that during development they fuse – it is not that they lack the genes, but that they are modified. And the fossils show some older horse with less fused fingers; and even deeper, and thus supposed to be older by mere stratigraphy, horses with three fingers – the gradual inheritance of a gene ever more changed.

And how weird that it is slowly becoming harder to identify them as horses since their skeletons gradually change the deeper it goes, but that it is obvious to be related and ancestral to those newer ones up to the horses today; yet going far enough it is impossible to find the ancestral for a tapir and a rhinoceros and for a horse – because when following any of their lineage through the layers we end up with a single animal that we cannot call to be exactly any of them, but which clearly fathered the next layer and so on slowly diverging into different forms.

We can easily tell them apart nowadays, but how to mark the border when it is no longer a horse or tapir? And how could a non-horse father a horse? The animal on that border would certainly be closer to its own parents than to modern horses; and so gradually impossible to group them in as any distinct and unique species.

Just as each person differs from his father and mother so too did said parents differed from their own fathers; and as he already knew we are thus more distinct from our grandparents – and how it should not surprise him then that after the greatest work in making anatomical models, just like the shock of medicine upon the discovery of the Americas and Australia, the more exact they are the more wrongly they fit. Since they were made for some European families and the very arteries and nerves of the ‘other races’ are differently disposed as well as the very average proportion of each member and organ is consistently different; yet how different could he really call them when by their genes it was so easily conceivable that not-so-long ago they could have been the same people who simply spread to different places – would he dare to seek the hint of such a travel and unveil the common origin of all men?

Perhaps he would be driven by necessity as his vulnerable kind went down in plagues; he taught his pupil, Aleksandron ton Megan, that it was a blessing to ‘the other races’ to be enslaved by the Greeks as they would be advanced into culture and civilization as they abandoned their false gods for the true faith – that slaves were absolutely necessary for life and the gods actually created Africa and Asia for that purpose as a reward for the brave who conquer them as it is against divine justice to enslave a fellow Greek, but how would his views of that divine right of his ‘race’ change when he saw them pitifully coming down with ‘diseases of white men’ that the other ‘races’ just ignored?

I do not think the common descent of all things would impart in him any compassion for the ‘lesser animals’ or make him puzzled in how no loving gods could have designed the blatant cruel savagery of nature⁵⁵, but I do think he would be shocked in how no disease is divine; being merely

⁵⁵ “With respect to the theological view of the question; this is always painful to me.— I am bewildered.— I had no intention to write atheistically. But I own that I cannot see, as plainly as others do, & as I shd wish to do, evidence of design & beneficence on all sides of us. There seems to me too much misery in the world. I

cannot persuade myself that a beneficent & omnipotent God would have designedly created the *Ichneumonidae* with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice. Not believing this, I see no necessity in the belief that the eye was expressly designed.

On the other hand I cannot anyhow be contented to view this wonderful universe & especially the nature of man, & to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance. Not that this notion at all satisfies me. I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton.— Let each man hope & believe what he

can.—

Certainly I agree with you that my views are not at all necessarily atheistical. The lightning kills a man, whether a good one or bad one, owing to the excessively complex action of natural laws,—a child (who may turn out an idiot) is born by action of even more complex laws,—and I can see no reason, why a man, or other animal, may not have been aboriginally produced by other laws; & that all these laws may have been expressly designed by an omniscient Creator, who foresaw every future event & consequence. But the more I think the more bewildered I become; as indeed I have probably shown by this letter.”

- To Asa Gray 22 May [1860], some more of his aforementioned letter; as ‘atheistical’ as ‘knowledge’ itself is, the mere facts of reality that there is no justification, or space, in any observed phenomenon to fit the magical fantasies of creationism or any miracle from the gods. Immanuel, although so perfectly wrong about almost every possible thing, was indeed right when he said that the more knowledge we have the less space for faith there is.

“Les progrès des connoissances physiques sont même d’autant plus funestes à ces erreurs, que souvent ils les détruisent sans paroître les attaquer, et en répandant sur ceux qui s’obstinent à les défendre le ridicule avilissant de l’ignorance.”

- Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain: Neuvième Époque, Sketch of a Historical Picture of the Progresses of the Human Mind: Ninth Epoch, where simply it goes on in how knowledge about the workings of natural invariably destroys such ideas founded upon ignorance since they are at odds disagreeing with the undeniable reality before us.

“Castris permunitis C. Sulpicius Gallus, tribunus militum secundae legionis, qui praetor superiore anno fuerat, consulis permissu ad contionem militibus uocatis pronuntiavit, nocte proxima, ne quis id pro portentio acciperet, ab hora secunda usque ad quartam horam noctis human defecturam esse. Id quia naturali ordine statis temporibus fiat, et sciri ante et praedici posse.”

- Ab Urbe Condita, From the Founding of the City, XLIV: 37, where we have this rare show of logic with it is told the soldiers to not fear the eclipse of the Moon as a portent of the gods, as they usually do, by predicting it and thus showing it is a ‘natural phenomenon’ that can be known and predicted; to which the knowledge truly destroys all the hateful crippling chains of superstition, as the wasteful delays of superstitious Nicias as in Thucy. VII: 50:

“καὶ μελλόντων αὐτῶν, ἐπειδὴ ἐτοῖμα ἦν, ἀποπλεῖν ἡ σελήνη ἐκλείπει· ἐτύγγανε γὰρ πασέληνος οὐσα. καὶ οἱ Ἀθηναῖοι οἱ τε πλείους ἐπισχεῖν ἐκέλευον τοὺς στρατηγοὺς ἐνθύμιον ποιούμενοι, καὶ ὁ Νικίας (ἦν γάρ τι καὶ ἄγαν θειασμῷ τε καὶ τῷ τοιοῦτῳ προσκείμενος) οὐδ’ ἂν διαβουλευσασθαι ἔτι ἔφη πρὶν, ὥς οἱ μάντιες ἐξηγοῦντο, τρεῖς ἑννέα ἡμέρας μεῖναι, ὅπως ἂν πρότερον κινηθεῖη. καὶ τοῖς μὲν Ἀθηναίοις μελλήσασι διὰ τοῦτο ἡ μονὴ ἐγγένητο.”

“quorum operum causas nulla ratione videre
possunt ac fieri divino numine rentur.
quas ob res ubi viderimus nil posse creari
de nihilo, tum quod sequimur iam rectius inde
perspicimus, et unde queat res quaeque creari
et quo quaeque modo fiant opera sine divom.”

- De Rerum Natura, On the Nature of Things, I: 154-159, where thus it says how divinities are introduced everywhere where there is ignorance of how things work; being solely a hinderment to truly understand the phenomena of how they happen by necessity without divine intervention, and as extra the lines before mention Iphigenia and all such direct harm of mad superstition apart from all reality or benefit.

“quem neque fama deum nec fulmina nec minitanti”

- De Rerum Natura, On the Nature of Things, I: 78, neatly fits here then in how there is nothing to fear from the empty fame of the gods nor any guided will for the lightning which always will strike at the rod through the path of least resistance.

“ποῦ ποτε κεραυνοὶ Διὸς ἢ ποῦ φαέθων
Ἄλιος, εἰ ταῦτ' ἐφορῶντες κρύπτουσιν ἔκηλοι;”

- Ηλέκτρα Σοφοκλέους, Electra of Sophocles, 824-825, and when will ever the lightning of Dias strike, or the deadly darts of Phoebus, if it remains forever silent even in the face of so blatant hereticism? If rain still falls, and dearth strikes, and the bolts of heaven still misses, or strikes, and we are healthy, or pestilence strikes, wholly regardless of all religious acts and in nothing are blessed or punished any who do or do not worship those?

“Ἡ γῆ δ' ἀνάγκη, κἄν θέλῃ κἄν μὴ θέλῃ,
τίκτουσα ποίαν τᾶμά πιαίνει βοτά.
Ἀγὼ οὔτινι θύω πλὴν ἑμοί, θεοῖσι δ' οὔ,
καὶ τῇ μεγίστῃ, γαστρὶ τῇδε, δαυμόνων.”

- Κύκλωψ, Cyclops, 332-335, if the earth produces grass by necessity, busy Gaia willing it or not, and so all things in nothing are changed by that meaningless acts of worship, but such wasted efforts only deprive the only god, our bellies, of all the benefits and better life it could have if it employed its resources to any productive task.

When we look around or analyse their lives, is not the pious and impious equally met with mischances and luck at random with no distinction on their fortune, except perhaps all the exploitation and wasted resources of devotees meaninglessly spent for the sake of that fantasy? All their holy prayers never achieving anything, but falling on deaf in-existent ears they die or recover from their infirmities and sufferings as often as the most impious of men; their fields produce nothing more nor better nor are protected, but just exactly as the surrounding conditions of the climate and soil dictate equally to all - and only toils spent on improving those, not any meaning plea to the gods, will produce any benefit or affect the outcome of any situation. The mystical religious rituals are entirely unrelated to the outcome. What could be more clear, even to one devoid of all knowledge of the world, that religion is a pure wasteful fantasy apart from all tangible reality? That they just waste calories bowing down their bodies and fanning the air with their hands and speaking words at the air solely to be lost to the wind and building structures for no purpose and living a crippled life of superstition for the detriment of their own happiness?

“hunc igitur terrorem animi tenebrasque necessest
non radii solis neque lucida tela diei
discutiant, sed naturae species ratioque.”

- De Rerum Natura, On the Nature of Things, I: 146-148, and of that lamentable state of religion where darkness holds empire over their minds neither the bright lightning nor the glittering morning Sun can disperse, but the light of Reason only; thus ‘science’, that is knowledge or just the unyielding logic of admitting only what is necessary to, is indeed by definition against such baseless superstitions as the imaginary deities of religions.

On the Ichneumonidæ, a family of parasitoid wasps, allow me to quote from Kaiho 1: 二: θ`-θ` δ to familiarize the reader with this insect, which scene is based upon the observations Robert made himself about spider behaviour and one of such battles of a wasp and a spider which he described during his circumnavigation of the globe:

"I observe an arachnid on the arched steel beam which coming out of the cement stand that serves as tresses to the high galvanized zipped roof tile; evilly on its perfidy being perfectly quiet ready to jump upon the poor foolish gecko which triggering the tripwires wanders near the sinister tunnel which is the fetid lair of silk.

The venomous fangs remain lustrously melanic even after so easily penetrating the stomach of the reptile; and making its soup the chelicerae move themselves independently one of the other leaving and entering the body of the animal where amid the white bubbles of foam forming on the open wound there is the red timbre of the blood mixed with the venom – it pulls the body to its house and after examining its powerless victim it delivers the last bite on the dorso-caudal proximal part, however although death could be so quick if the bite were fatal it instead bends its pedicel putting the venter of its abdomen together with the venter of the cephalothorax and revolving its prey before it weaves from its spinneret the silk coffin where the victim is preserved while the poison liquefy its body for it to be drank later for even if it is more brutish physically than a nephila or an epeira and more cumbersome on its ability of wrapping its prey it also does not give itself the crass trouble of ingesting solid food much preferring to watch its preys melting alive into juice first.

It drags the cocoon towards the others at the back of its house, however differently from a cocoon where a caterpillar melts itself to transform itself into its adult form the path of the victim is only one-wayed; as seen on the rat or small mammal there in the mortuary bodega which tail was not wrapped and how much more horrible was such creature squeaking and kicking the tetra-pulmoned arthropod with its weak pinky legs being unable to leave while the false tarantula, a 'wolf' from the lycosae, dug into its body with brute force and venom until finally immobilizing it to the point where still alive it is no longer able to move – and although it would not have the same success if it decides to attack me much more noise and uproar I would make if such thing were to get near me, thus it is better for me to go away at once.

However I am stopped upon seeing dark death looming over us; just for a few moments I hear the buzzing of its flight before that in an instant the flight turns into a sudden rush of the wasp upon the spider – and as quickly as it attacked it flies away through the gymnasium.

The spider is clearly wounded for it walks with difficulty and upon getting to the border of its level on the stand it falls rolling onto the next level; where people notice the creature so that with yells and jumps they get away from the arachnid which continues throwing itself through the stand until it gets to the ground level right on the side of the exit of the gym – through which it proceeds dragging itself to the turfs of grass and trash outside.

While I went to the roll-up door on the exit to watch such flight I hear the pepsis already returning; the 'tarantula hawk' wasp lands and walking in circles seems surprised or confused in not immediately finding its victim, but without delay it takes flight again with a different attitude – quickly vibrating its wings and antennae while making semicircles on the air like a laconian hound sniffing around for a fox.

The spider is well concealed, even so it is soon found out and rises its pedipalps and frontal pair of legs with its positioning following the enemy which evidently still fearing the fangs takes its time doing manoeuvres in the air; until seeing opportunities it comes down so repugnantly grabbing the dorsal thorax of the spider and contorting its own abdomen so that it stings the underside of the thorax of its target before fleeing and repeating the process until on the third time before attacking it examines the motionless spider with its antennae confirming its deed before beginning to drag the body – at which point I interfere and kill both the flying tyrant as its prey.

The arachnid, if it has any understand and knowledge, is thanking me from heavens for having taken its life; and not needing to watch the future spectacle before my eyes the mere terrible remembrance evokes every

the hindering of bio-mechanical processes as something literally blocks the pathway – and how the gods would have to have designed all that misery intentionally which parasites do not differentiate the ‘just’ from the ‘unjust’, or his Hellenic master-race, but infect all of humankind and ‘lower animals’ equally, giving that there is such genes and process also present there to be exploited by the foreign organism .

And how some rats and ‘spontaneously generated lower animals’ could indeed only reproduce like greater animals since its genetics came from some previous population and never could he find that ‘base model’ of the species for it to be generated and re-introduced into the other to reset the cumulative changes, and in how they were genetically more akin to man than to most other animals; and how they so often caused disease exactly because of that proximity on the likeness of their organisms, just as they could serve so well to test the effect of drugs by that very proximity – and how uncanny that offering them treaties and other substance the very taste of what attracted them and what repugated them, and the very effect the substances produced on the organism, reflected that degree of their proximity to us.

Plato himself called sponge to be animals and he followed suit explaining how tunicates responded to touch and thus, even being sessile, classed ‘above plants’ as the basest animals; facts

sentiment of repudiation and horror – even if against such hunting wasp its destiny would still be better than against some even more atrocious members of the apocritae.

The hunter would only drag the spider to its nest and bury it together with an egg so that paralyzed with the venom the arachnid would remain alive while the egg hatches and feed itself from the fresh non-vital parts of the paralyzed living creature to just at the end kill it; while a parasitoid one would already inject such larva directly into the body of its target which would not only be born inside of it eating it, but would infect the nervous system of the very spider so that it might build a web that protects them so that the larva may hatch to eat the spider slowly by the non-vital parts while protected by both spider and web – what is arguably better than the caterpillar which are infected with dozens of larvae at once and which babies have the audacity of eating only the non-vital parts so that they leave their host to form their cocoons since the infected caterpillar will do them not harm, but rather it will use its own silk to weave the remainder of their cocoons and defend such day and night until it itself dies from hunger little before the exiting of dozens of the same vile creatures from the cocoons where sisters and brothers will delight themselves in incest upon the cadaver of the host whom they partially ate and who gave its life for them before they go on then to infect more of such infantile butterfly which over half suffer such same fate.

Ergo I go out of my way to kill such and forfend the creation of a new generation, however it is vain for it is a too intelligent and successful strategy on the market of life; and thus before the free market without regulation it is explored ever so – as it is ubiquitously found around the globe the endless cycle of such highest cruelty upon a multitude of species.

The bizarre result of the free competition between the species where only the most perfidious creatures survive; although the world is still infested with those homo pseudo-sapiens too ignorant and stupid so that they say that some sickening author, ‘of love and benevolence’, intentionally created such immoral cruel villainy that is such ‘perfection’ of nature.

that somehow translators would put notes saying that they were mistaken – and how could he then confirm his assertions and definition of what an animal is by seeing how they all share the same basic cell with an amorphous double phospholipid barrier in contrast to the fungus which closer to animals did not have the chloroplast just as rather than cellulose their rigid structure came from chitin.

How he would be forced to admit such progressive degree of relation, and then to the rod-shaped anucleic animalia as more distant than the eukaryotic ones; how would he keep his Great Chain of Being before that?

The disease of ‘mad cows’ described before his time would now be plain to him to be a certain essential protein for brain development; and thus it infected humans exactly because we use the same genes and the same protein on our brain – another of the so massive number characteristics found through the entire mammalian kingdom.

And the reason for it to be so unchangeable would be rather obvious; simply because a mutation to it and variation would mostly be fatal to the creature and it could not be passed on since the dead would produce no offspring – it was thus a strongly conserved part of the genome, and as many others the reasons why so many diseases could affect virtually all mammals since they inferred with the same basic bodily processes used by them all.

How could the gods repeat that on their every creation? And how could nature allow so many useless things as the redundant process of development of the embryo and the vestigial organs and muscles, so perfect on other animals but meaningless in us? How could that possible be our ‘final perfect state’? Rather than such perfect creation we are gradually changing too.

And do not the fossils show that nothing was created out of nowhere, but that they came from somewhere and from some form gradually reaching their current range and shape; they had a past that led to their current form and they too have a future where their offspring will go on more and more distinct to the present forms – and nothing that he could find was independent and unique, but all were as the successive lineage of ever more distinct branches from a same root.

The very same genes present on trees and the most distant single-cell organisms are present on humans; strongly conserved since a change on them would be fatal – and thus eternally present serving as some base that little by little was built upon by the iteration of copies adding or changing the code to produce all known.

Humans have the weird body plan where the nerve of our larynx does not connect directly to the brain, but passes below the arch of the aorta before going up; and so to giraffes with meaningless meters of nerves going down the neck and back up rather than what would be expected from some intelligent design – yet the genes can be traced back to fishes where that distance and plan

was negligible, and which rather than appearing on every mammal it indicates only that they all inherited it.

Much closer our ubiquitous back pain is inexistent in monkeys who are so alike us; since we move erect much more while still having the apparatus not perfectly fit for that so that it is damaged and worn as if by the misuse of walking erect – and where should he go to explain how the apparently so perfect organ of the eye could be so badly constructed as to have blind spots by meaningless passing structures before the clear lenses? Our very immune system seems like a divine blessing against all diseases; unlike lower animals like crawling insects ours can learn to identify different invasors and deal with them more effectively – but how can such a blessing reach to mere dust and pollen attacking ourselves for harmless things?

Would he dare to say that ‘we admire the wisdom of God even in the weakness and folly of man’?⁵⁶

Far from some divine curses it would be clear that it was all merely activated by certain chemical reactions that could be as easily fooled and manipulated rather than some divine force.

Far from just those curiosities of the flawed patchwork of adaptation is that our bodies he of course would see how every single detail and all its wonderful usefulness was also thus inherited by gradual adaptation; as the very bones that support him having come from a single original fish with that adaptation and the split of lineages at the development of the so advantageous jaws with also the genes for scales merely reorganized to produce enamelled teeth – and how the genes for swim bladders changed to that of our breathing apparatus still in the water as the lungfish which is more related to whales, and us and all tetrapoda, than to all other fishes of rayed fins.

So that when he sees how mudskipper adapted to crawl over land and not suffocate and how epaulette sharks in their coastal habitat are trapped in puddles at the low tide so that they both intentionally go out of the water changing ponds while rather than lungs have developed the ability to deactivate brain processes and their body to survive the low oxygen environment; or how killifish traverse about the mangrove forest floor for months and how catfish too drag themselves with their strong members over land – and how the sea robin which even without leaving the water developed a unique structure of six legs, when he sees all that he still knows they independently evolved it and our lineage came from such other fish whose group has to be classified as more alike human than to almost all other fishes in the waters.

⁵⁶ “And we may on this, as well as on many other occasions, admire the wisdom of God even in the weakness and folly of man.”

– The Theory of Moral Sentiments VI: 3.

And as he discovered that fish with gradually stronger humerus and bi-partite forearms he would see the muscle attachment points showing it was becoming able to truly walk and not only drag itself; see the specimens go now far from the water conquering land so that he could infer the arrival of eggs, so many dozens of millennia before chickens, that could withstand the dry environment – and nature trace that amniota further in how it was divided in two factions with one having one extra hole on their skull, on the temporal fenestra, and the other two.

To follow then the complex jaw so full of bones enlarging in the one-holed lineage and its ability to pickup vibrations being concentrated into a small complex of a hammer, anvil and stapes; and by merely passing his eyes over a fossil being able to guess how old it is in the mammalian lineage by the progression of that jaw-reduction trend into our unique ears – and if he needs any more help he can look at the teeth themselves and far from the single-type of other animals see the complex tool box of our heterodontical mouth. Look just a little below at the neck he could then judge if it was a ‘true mammal’ by seeing if the throat had a strong enough hyoid to suckle milk, a power unique to such muscular lips and throats as no other animal has – and then zoom in on the division of our tree modern mammals as those that still lay their eggs and those that have that gene calcified membrane destroyed by some retrovirus so that they now have internal gestation, marsupials having still their epipubic bone so that they birth early by necessity of their narrow hips and us without it having space for the full gestation.

With mere careful observation of the natural world through the vestiges and legacies left by almighty Time the impermanence of the forms of living beings would be undeniable; and with the more knowledge acquired less space there would be for faith – our origins are truly set in stone, both flaked and fossilized, and long ago all argument and beliefs on the subject have been rendered redundant in face of the certainty attained.

As he sought a purpose in nature at which it was gradually evolving towards he could see the great Parnassus Mount and ask why the hoary harbour of Deucalion³⁷ was bald of all its verdant vegetation; and why from all animals only the dryads and the companions of Pan make merry in Koryko³⁸ – while in contrast if the the deep forests of Olympus were there only because Orpheus with his sweet lyre made them gather around, how could they remain there so long.³⁹

³⁷ That is, the snowy mountain tops.

³⁸ A rocky cave in Parnassus.

³⁹ “πόθι Νύσας ἄρα τὰς θη-
ροτρόφου θυρσοφορεῖς
θιάσους, ὦ Διόνυσ’, ἧ
κορυφαῖς Κωρυκίαις;
τάχα δ’ ἐν ταῖς πολυδένδρεσ-
σιν Ὀλύμπου θαλάμαις, ἔν-

Or rather than any divine will dividing the land was it simply the susceptible place for chemical reactions to happen? The fertile land, the smooth water and the calm wind which catalyze the activation energy for the seeds of life – which both created as still shape every reaction to their very behaviour and form.

If he ever got to see the enormous Cordilheira he could not help but ask himself the reason of there being animals and plants on the humid side of the mountain and not on the other. Did the gods created such unique species only on one side and spread through the latitude without creating on the other side? Or is it the simple reality that they simply could not live on the inhospitable conditions and thrive only on such agreeable side? But could not the gods make some perfectly adapted animals there as they made to the other side?

Yet all around the world mountains block the rain clouds and create fertile forests on that humid side; while on the other within its shadow we find deserts devoid of all luxury.

He had already determined the reason why the sea is salty; this time not by the usual meaningless excuse of ‘it was the design of the gods’, but that salty water is denser and it would flow to the lowest point all gathering in one place – the rivers carried minerals and deposited into the ocean.

Amid the minerals he would then be able to see the very essential elements used by plants and the factors that made a soil fertile or not; he would see that just like on the mountains it was the sediment of rivers that made forests and life so abundant near them and not some magical property of the river gods – and as he had already described the winds as an ocean of air flowing like rivers he would perhaps see how those rivers of elastic fluid would also transport sediment and such natural factors entirely determined the conditions that allow things to prosper or not.

θα ποτ' Ὀρφεὺς κιθαρίζων
 συναγεν δένδρεα μούσαις,
 συναγεν θήρας ἀγρώτας.
 μάκαρ ὦ Πιερία,
 σέβεται σ' Εὐνίος, ἥξει
 τε χορεύσων ἅμα βακχεύ-
 μασι, τὸν τ' ὠκυρόαν
 διαβάς Ἀξιὸν εἰλις-
 σομένας Μαινάδας ἄξει,
 Λυδῖαν πατέρα τε, τὸν
 τᾶς εὐδαιμονίας βροτοῖς
 ὀλβοδόταν, τὸν ἐκλυον
 εὐπιπτον χώραν ὕδασιν
 καλλίστοισι λιπαίνειν.”

– Βάκχαι, Bacchae, 556-575; the scene I reference on all this comparison, that is two inhospitable places and a fertile one following their course rather than any decree and design of the gods.

He would see trees common only in riparian areas; and if he saw their fruit rotting on the ground he might understand that it was not just a question of suitable soil and nutrients, but that the water itself carried the trees planting them along the river bank and the naturally low lands through which water flows through would tell him about who gravity made the seeds roll downhill – uphill being devoid of such trees as there would be no means for the seeds to be carried up, but which he would understand why there are fossilized trees showing that they grew up there in the past and had a much wider range as he finds also the fossil of ancient megafauna that has gone extinct and which could indeed eat such large fruits and disperse it as there is no longer any animal that can.

But now that it is extinct, so too the plant reduced its range to the extreme; it is no longer a ‘perfect work of nature’, but once being ‘perfect’ its highly developed organs serve it no longer any useful purpose as it is a misfit ‘perfectly designed’ for a different time so that now they are badly-adjusted and inept at survival as only chance instances carry very few of their seeds to germination – a phenomenon so common he would see how every living being is full of useless or even detrimental organs as leftovers from ancient selective pressures that shaped their form, just as the struggle for survive leaves only those most well adapted alive to continue on eternally ‘perfecting’ themselves as the environment shapes them to whichever configuration and build better fills its available niches.

The fossil record showing ancient ecosystems created from different natural conditions; and animals adapted perfectly to them – so that as conditions continually change so does the fauna and flora.

Not only such speciation that continually produces new species, and is denied by many still today due to their ignorant beliefs in fantastic myths, but also he would try to deny that animals could even be extinct, as because of the same myths its extinction was as denied as speciation not many decades ago; that it was impossible for the perfection of nature to lose one of the divine creations so intelligently designed – and even so he would see the fossils all around the globe of animals that few millennia ago were so common, but that nowhere are found alive today nor could the planet simultaneously contain such infinity of species cohabitating when today much less than one thousandth of it is found extant.

Could he at this point dare to suppose the eighteenth century excuse that ‘there were several waves of creation’? That the gods made the dinosaur and their world just to destroy it all and make ‘a new age’ of perfectly adapted animals to different ecosystems time after time?

Much rather all fossil record show that none appeared thus perfect from nowhere, but by the means of the long process of inheritance of the most useful traits through generations struggling for survival.

All the strongest hints of 'evidence' cannot convince those who are wilfully blind; just like today most of the world turn their faces away from knowledge and seek the comfortable ignorance as their imagined protection against reality – I know not what the inquisitive mind of Aristotle would do since his faith always preceeded his reason, but he would be hard pressed in cognitive dissonance as he looked to the volcanic island right from the coast of the Cordilheira.

Island which did not exist for long and which naturally came desolated from the sea due to their violent formation, but whih now are populed by unique species not found anywhere else in the world – could it be postulated some minor event of creation by the gods every time such island appears?

For the surface of the Earth is thus in constant production of new island while they entire continents are risen, sunken or torn apart; the fossils of Sahul and Sunda are of no living animal today, but far from the current animals appearing from nowhere we see the same gradual progression of older forms, while most indeed are extinct as just a few branch out into many – and rather than a single consistent biota we see that neighbouring islands can be as different as two continent since rather than created there as a set there is a direct correspondence of the ocean currents and the coast where the closest species to those of the island live, or on this case specifically the archipelago is suddenly cut by a hard line where land animals completely change from their close neighbours and if we look under the water we see that it happens exactly where the shallow sea of the archipelago drops to much greater deeps showing their geological history as once part of a different continent whose biota it still carries in the form of its unique descendants.

The very rats he would have taken on his travels would serve to his study as they ravaged the wildlife which had not the instinct to flee; or birds devoid of flight since on far island they were the only animal that managed to find that save haven – and how the most fearful and quickest birds would soon be the only ones left and the gene pool pruned of all other characteristics as if being selected to produce the most adapted offspring to survive the new environment.

After such destruction and so mighty multiplication of their numbers the rats would now experience mass death as they would find themselves in an island devoid of food; some might even turn cannibal as that source of food would still be available in that island that cannot possible support that massive population – so that he could see the checks of nature upon the population of rats and the simple necessity of a trophic chain where the food produced by plants is very inefficiently used by those that consume it so that population numbers grow quickly smaller depending on how high the animal is on that chain. So that, if the destruction was not so great as to make it impossible to reach equilibrium again, stable populations would be found where the boom of a prey species precedes the boom of the hunter; who them decimating the prey population to inflate its own goes through a sharp decline by the lack of prey – and so too the strategic reproduction selected for would differ by its niche if mass-producing cheap spawn of

smaller size⁶⁰ or investing greatly on a youth with great survival chance, as any other characteristic of their body and behaviour selected by the environment rather than ‘the wise foresight of the gods in making prolific those coward animals that are good for food so that they are not all eaten upon and their race fail while the ferocious have few progeny, in order to prevent them from filling up the world destroying all things so that man would not be able to sustain themselves’⁶¹.

⁶⁰ “δύο δὲ τὰ γένη ἐστὶν αὐτῶν: οἱ μὲν γὰρ μεγάλοι τὸ χρῶμα ἐπίπερκνοι καὶ τὸ λευκὸν τὸ ἐν τῷ μετώπῳ μέγα ἔχουσιν, οἱ δ’ ἐλάττους ἐπίξανθοι, μικρὸν τὸ λευκὸν ἔχοντες. τὴν δὲ οὐρὰν οἱ μὲν κύκλῳ περιποικίλον, οἱ δὲ παράσειρον, καὶ τὰ ὄμματα οἱ μὲν χαροποί, οἱ δ’ ὑπόγλαυκοι: καὶ τὰ μέλανα τὰ περὶ τὰ ὦτα ἄκρα οἱ μὲν ἐπὶ πολὺ, οἱ δ’ ἐπὶ μικρὸν. ἔχουσι δὲ αὐτῶν αἱ πολλαὶ τῶν νήσων τοὺς ἐλάττους, αἱ τ’ ἔρημοι καὶ οἰκούμεναι: τὸ δὲ πλῆθος πλείους ἐν αὐταῖς ἢ ἐν ταῖς ἡπείροις: οὐ γὰρ εἰσιν οὐτ’ ἀλώπεκες ἐν ταῖς πολλαῖς αὐτῶν, αἵτινες καὶ αὐτοὺς καὶ τὰ τέκνα ἐπιούσαι ἀναρουῦνται, οὔτε αἰετοί: τὰ μέγала γὰρ ὄρη ἔχουσι μᾶλλον ἢ τὰ μικρά: ἐλάττω δὲ ἐπὶ τὸ πολὺ τὰ ἐν ταῖς νήσοις. κυνηγέται δὲ εἰς μὲν τὰς ἐρήμους ὀλιγάκις ἀφικνουῦνται, ἐν δὲ ταῖς οἰκουμέναις ὀλίγοι γίνονται καὶ οὐ φιλόθηροι οἱ πολλοί: εἰς δὲ τὰς ἱερὰς τῶν νήσων οὐδὲ διαβιβάζειν οἶόν τε κύνας. ὅταν οὖν τῶν τε ὑπαρχόντων ὀλίγους ἐκθιρῶνται καὶ τῶν ἐπιγυγνομένων, ἀνάγκη ἀφθόνους εἶναι.”

– Κυνηγετικός, Cyngetic, V: 22-25, where thus Ksenophon notices how the mainland lagomorph is larger while those of the many islands are all smaller; noticing this example of island dwarfism and even giving reasons for their great quantity as the lack of predators as there are no foxes there nor do the winged dogs of Zeus hunt on the small mountains, which he notes as the usual geographic feature of islands, preferring rather larger mountains.

The astonishing powers of perception of Ksenophon are second only to those of god-like Charles Robert Darwin; and the many observations he made of nature, and of so many others writers throughout all of history, have finally come together and become understood only a century and a half ago when we discovered how thus species are formed.

⁶¹ “Λέγουσι δὲ καὶ τότε Ἀράβιοι, ὡς πᾶσα ἂν γῆ ἐπίμπлатο τῶν ὀφίων τούτων, εἰ μὴ γίνεσθαι κατ’ αὐτοὺς οἶόν τι κατὰ τὰς ἐχίδνας ἡπιστάμην γίνεσθαι. καὶ κως τοῦ θείου ἡ προνοίη, ὥσπερ καὶ οἴκος ἐστὶ, εὐδουσα σοφίη, ὅσα μὲν ψυχὴν τε δευλὰ καὶ ἐδῶδιμα, ταῦτα μὲν πάντα πολύγονα πεποίηκε, ἵνα μὴ ἐπιλίπη κατεσθιόμενα, ὅσα δὲ σφέτλια καὶ ἀνιηρά, ὀλιγόγονα. τοῦτο μὲν, ὅτι ὁ λαγὸς ὑπὸ παντὸς θηρεύεται θηρίων καὶ ὀρνιθῶν καὶ ἀνθρώπου, οὕτω δὲ τι πολύγονον ἐστὶ: ἐπικυῖσκειται μόνον πάντων θηρίων, καὶ τὸ μὲν δασὺ τῶν τέκνων ἐν τῇ γαστρὶ τὸ δὲ ψυλόν, τὸ δὲ ἄρτι ἐν τῇσι μήτρησι πλάσσεται, τὸ δὲ ἀναιρέεται. τοῦτο μὲν δὴ τοιοῦτο ἐστὶ: ἡ δὲ δὴ λέαινα ἐὼν ισχυρότατον καὶ θρασύτατον ἅπαρ ἐν τῷ βίῳ τίκει ἐν: τίκτουσα γὰρ συνεκβάλλει τῷ τέκνῳ τὰς μήτρας, τὸ δὲ αἷτιον τούτου τόδε ἐστὶ: ἐπεὶ ὁ σκύμνος ἐν τῇ μητρὶ ἐὼν ἄρχεται διακινεόμενος, ὁ δὲ ἔχων ὄνυχας θηρίων πολλὸν πάντων ὀξυτάτους ἀμύσσει τὰς μήτρας, αὐξόμενός τε δὴ πολλῶ μᾶλλον ἐσκινέεται καταγράφων: πέλας τε δὴ ὁ τόκος ἐστὶ, καὶ τὸ παρὰπαν λείπεται αὐτέων ὑγιὲς οὐδέν.

Ὡς δὲ καὶ οἱ ἐχιδναὶ τε καὶ οἱ ἐν Ἀραβίῳσι ὑπόπεροι ὄφεις εἰ ἐγίνοντο ὡς ἡ φύσις αὐτοῖσι ὑπάρχει, οὐκ ἂν ἦν βιώσιμα ἀνθρώποισι: νῦν δ’ ἐπεὶ ἀνθρώπωνται κατὰ ζεῖγεα καὶ ἐν αὐτῇ ἢ ὁ ἔρσην τῇ ἐκποίησι, ἀπεμένου αὐτοῦ τὴν γονὴν ἡ θήλεα ἄπεται τῆς δευρῆς, καὶ ἐμφύσα οὐκ ἀνίει πρὶν ἂν διαφάγη. ὁ μὲν δὲ ἔρσην ἀποθνήσκει τρόπῳ τῷ εἰρημένῳ, ἡ δὲ θήλεα τίσιν τοιγύδε ἀποτίνει τῷ ἔρσενι: τῷ γονεὶ τιμαρρόντα ἔτι ἐν τῇ γαστρὶ ἐόντα τὰ τέκνα διεσθίει τὴν μητέρα, διαφαγόντα δὲ τὴν νηδὺν αὐτῆς οὕτω τὴν ἐκδυσιν ποιεῖται. οἱ δὲ ἄλλοι ὄφεις ἐόντες ἀνθρώπων οὐ δηλήμονες τίκτουσι τε ὥα καὶ ἐκλέπουσι πολλὸν τι χρήμα τῶν τέκνων. αἱ μὲν νῦν ἐχιδναὶ κατὰ πᾶσαν τὴν γῆν εἰσὶ, οἱ δὲ ὑπόπεροι ὄφεις ἀθρόοι εἰσὶ ἐν τῇ Ἀραβίῃ καὶ οὐδαμῇ ἄλλῃ: κατὰ τοῦτο δοκεῖσιν πολλοὶ εἶναι.”

Upon seeing tenrecs he could compare to his own rats the behaviour of some, but how very different others would be as they have entirely different organs and behaviours perfectly adapted – some to live in trees while others to dig, others to swim and so on. He could easily compare them to other arboreal animals just as to his own rats while others would be alike blind moles and hunting sea otters all the way to so ‘unique’ creatures as porcupines – simply what appeared the best to their environment, and could he doubt that his rats on new islands would not do the same as those as some mutation allowed them to explore that niche and be then selected by the most successful survivors into so many new ‘species’?

Having butterflies, snails and any other sort of creatures with him he would see how very quick they adapt; how any of such with flashy colours are an easy pray on the dark volcanic beaches so that they are promptly killed – and having natural variation on their colouration he sees how most dark coloured among them more often escape so that they produce a new generation darker than the previous ones. On and on until soon they are so distinct he has to call them a ‘new species’; while those of the same original population who went into the cover of the foliage will rather suffer a selective pressure to another colour just as their digestive system is selected for some other food – and he will observe thus one species ceasing to exist, but two new ones springing from it, be he there watching it for just a few years or coming back to check that indeed that new species has come from the DNA of the stock that he keeps on of his ship.

The same, of course, with the butterflies and all else; so that looking now to the absurd extend of camouflage used by leaf and stick insects he would know that they were not designed by god to so perfectly fit that environment – but that their ancestors were violently killed endlessly to the point where from each generation only that most optimal form survived on until reaching such degree of perfection on their shape and behaviour of standing still.

Mantises, and caterpillars and all that had the chance to find that niche, and he will see using that camouflage to bait for animals to come close enough to be preyed upon; even plants he will see eating animals by using of such trickery of smells to bait them while the grand diversity of flowers he will notice to be no design, but the simple fact that those that look more attractive will be landed and pollinated more often so that they end up hyper-specialized to imitate the female of their main pollinator – and how on the butterflies even a roundish stain can look like an eye to

– Ιστορίαι, Histories, III: 108-109, where thus Herodotus exemplifies with rabbits reproducing so quickly for the convenience of humankind and with lions that ‘grow claws and destroy the womb of the mother so that she can only reproduce once in her life’, which is not even a sustainable population replenishment rate to even suggest such foolishness, so that like that are the winged serpents with an absurd method of reproduction, and also impossible since it is unsustainable if he were to give a single thought about what he said, by the divine providence in balancing nature.

their predators so that fearing to become prey themselves they will evade that one, so that it lives on leaving descendants with ever more perfect mimicry of the ocelli on their wing.

How curious at first he would find that his insects were mimicking those already there ever more looking like them even if they were flashy rather than blending with their surroundings, but which strange case would be very simply understood as he saw that those were already fit for their environment and carrying some noxious substances the predators have learnt to avoid them since rather than hiding showing off that threat is better for them – and thus other harmless species so often look like bees, and try to act like them, and other dangerous things as the predators too have evolved the behaviour by the selection to avoid that threat.

Much more puzzling would have been some colourful and flashy colours that advertised no threat, but merely made life harder for them; so that much puzzling over it would be necessary until he noticed that such flashy butterflies are all males while the females retain their plain colouration – and throughout the entire animal kingdom he would then see that repeated of unique male characteristics, not by any intentional design of duality but by increasing their chance of reproduction.

Thus he would be far from surprised at those tenrecs and his rats transforming into almost mirror images of other distant species; since it would be something so easily conceivable upon little thought about the necessities implied by competition and inheritance, something that he could see happening in a few years before his eyes and something that he has seen now thousands of times throughout all of natural history – a limited number of common niches and animals time after time after time being moulded to that local maxima as it is selected to that optimal form. A more interesting study would be if he saw the industrial revolution; the mesopredator mess we made and the many new niches of the giant urban biome – and the perturbation of nature as butterflies start mimicking soot itself rather than plants and the onset of mass extinction as species quickly change both the behaviour as their physiology to those new never-seen niches that nothing but anthropogenic change created.

The effects of agriculture and how humankind affected the distribution of crops, and made unique very distinct varieties from the descendants of a single older form, would be obvious but then coconuts being so common around the world he would feel just as silly to suppose the gods re-created them time after time as to say the crops were the work of the gods, but that simply their capacity of floating allowed them to be carried by the waves to germinate afar; just as the distribution of every other plant present was due to them being carried by water, wind, birds and any other means – and the struggle for life leaving only the most fit to go on germinating the next generations, just as birds are the most common animals in every island as they clearly can easily be the first to colonize new land.

He was familiar with the quail pits and the hobby of breeding stronger birds than any in nature or artistic ones with characteristics that did not exist before; characteristics then passed down to their offspring as a new race – just as the prized Laconian hound and the many other unique products of domestication that he goes on in his works of how humans can artificially make new distinct ‘sub-species’.

And he would see nature does the same as only those with the best characteristics live on, and so the beaks of birds diverge as each specializes to a different kind of food around and are more successful at it than the others and the plants and animals present define what beak shape will exist there; and the very capacity of flight that took them there is often lost turning them unto so different of an animal in so short a time forming a lazy meek animal quite opposite to those raised by pit-fighting breeders – since just as breeders choose some they like to procreate on so too on the brutal environment of nature most seeds die and only those whose genes are thus more successful for that niche are those who form the next generation.

Hardy reptiles too are commonly found on those volcanic island since they can weather the salty sea and get there alive, but the place that would be such a humid haven to amphibians is devoid of them; how could he advocate for the individual creation of animals and that the gods simply did not feel like creating amphibians on volcanic island instead of that simple reality before his eyes that they could not cross the salty barriers to get there?

How vain would have been the work of the gods if they had divided the countries of the earth with the separation of the ocean and the creation of unique species; for just like the bold race of men in boats conquered the violent ocean so too the animals go where it should be forbidden to them and destroy all divisions and species once found there.⁶²

^{62a}Nequiquam deus absceidit
Prudens Oceano dissociabili
Terras, si tamen impiae
Non tangenda rates transiliunt vada.
Audax omnia perpeti
Gens humana ruit per vetitum nefas.”

– Carmina I: III: 21-26, where Horatius so call men heretic for ‘crossing the boundaries made by the gods’ as they explored across the sea; although on his quest Aristotle would have to go much farther in his sin against the gods and as the descendants of Rome in the Age of Exploration fifteen centuries after Horatius, who are my forefather five before me, go across the surface of the earth conquering both Poseidon and Ares.

“Ceffem do fabio Grego, & do Troyano,
As nauegações grandes que fizeram:
Callefe de Alexandro, & de Trajano,
A fama das victorias que tiuerão,
Que eu canto o peyto illufre Lufitano,

IV – The Mechanisms Of Creation

Now I hope you will forgive me from this apparent digression and tangent into the great argument of Natural History which is today solved beyond all doubt, but any familiar with the basic of science must remember how careless the masses are in their enquiry for the Truth as they rather to wander to what so ever is closest at hand⁶³ – nor should we reason it rashly as if it were of no relevance⁶⁴.

Rather it is imperative for the reader to make himself familiar with the ideas of creationism which Robert fought against his whole life; and that Aristotle might have rejected the very reality before his eyes in exchange for keeping his baseless beliefs – so that thus we have to wander through these many places before we can arrive at the Truth we desire⁶⁵.

‘That is just how god intended’ would be all that he needed to answer in order to ignore it all⁶⁶; and while we can never convince someone who does not want to learn but merely ‘to have an

A quem Neptuno, & Marte obedecerão:
Cesse tudo o que a Mufa antiga canta,
Que outro valor mais alto se alevanta.”
– OS LUSIADAS I: 17-24.

⁶³ “οὕτως ἀταλαίπωρος τοῖς πολλοῖς ἡ ζήτησις τῆς ἀληθείας, καὶ ἐπὶ τὰ ἐτοῖμα μᾶλλον τρέπονται.”
– Ιστορία του Πελοποννησιακού Πολέμου, History of the Peloponnesian War, I: 20.

⁶⁴ “Βουλευέσθε οὖν βραδέως ὥς οὐ περὶ βραχέων.”
– Ιστορία του Πελοποννησιακού Πολέμου, History of the Peloponnesian War, I: 78.

⁶⁵ “Questi organi del mondo così vanno,
come tu vedi omai, di grado in grado,
che di sù prendono e di sotto fanno.

Riguarda bene omai sì com' io vado
per questo loco al vero che disiri,
sì che poi sappi sol tener lo guado.”

– Paradiso II: 121-126, which my usage is quite a stretch, but the poetic power holds even better.

⁶⁶ “E di ciò non è l'uomo da biasimare, ch'è non esso, dico, fue di questo difetto fattore, anzi fece ciò la natura universale, cioè Iddio, che volse in questa vita privare noi da questa luce; che, perchè elli lo si facesse, presuntuoso sarebbe a ragionare.”

– Convivio, Banquet, III: 4, which Aristotle would not have the artfulness to so charming phrase such deranged madness as ‘If god choose to deny them this light of perfection, it would be presumptuous of us to question the wise creator whose ways and intellect is incomprehensible to our reasoning.’.

opinion' we ourselves if we seek the truth must be always capable of fully justifying why we believe something and not something else – not by that mindless wilful blindness that Aristotle just above might have used, as we can hope for little other answer when such a man so deep in the disease is praising the acts of the gods and happen to find them to be evil⁶⁷, but by showing that was what our intellect forced us admit.

Be we amid the philosophy storm in ancient Greece or our modern era of information and its wilful blindness in denial; or even if we are wrong and are called by the gods before the Olympian throne to be judged by the Cronian sceptre we have to be able to justify ourselves though against the onslaught of the wileful glaucopous daughter of Aegis-bearing Zeus in how we were forced by logic to deny their existence.

But as hopeless as it might seem we can expect eventual triumph as we are reminded that there is no sadistic divine will or cruel laws of nature, or any such insuperable defile that could subjugate us with so insolent a victory, but our opponents are mere ignorance and denial which can never truly check the might of our ingenious curiosity⁶⁸; we merely submit to and yield to the compulsion of necessity and admit nothing more of ours or others invention, a compulsion so mighty that even the supernal and infernal gods themselves are not exempt to evade it – ergo we wage war upholding the banner of Reason, as a peace which reduces our minds to slavery, and our quality of life to stagnation in eternal misery, is heavier to bear than the fighting as free men.

“χαλεπώτερα σου μὴ ζήτηι καὶ ἰσχυρότερα σου μὴ ἐξέταζε· 22 ἂ προσετάγη σοι, ταῦτα διανοοῦ, οὐ γὰρ ἐστὶ σοι χρεία τῶν κρυπτῶν.”

– Σοφία Σειράχ, Wisdom of Sirach or Ecclesiasticus, III: 21-22, which Dante could well quote that ‘you should not seek things too hard for you nor search things stronger than youut simply do with reverence what is commanded to you’; abdicating all intellect to blindly follow what is told us as thinking and reasoning are heresy.

⁶⁷ “ποῦ χρηὴ τίθεσθαι ταῦτα, ποῦ δ’ αἰνεῖν, ὅταν
τὰ θεῖ’ ἐπαινῶν τοὺς θεοὺς εὖρω κακούς;”
– Φιλοκτήτης, Philoctetes, 451-452.

⁶⁸ “They sought – they panted for right views. They groaned for perfected knowledge. Truth arose in the purity of her strength and exceeding majesty, and the wise bowed down and adored her.

[...] As if by some sudden convulsive exertion, reason had at once hurled superstition from her throne. The feeblest intellect had derived vigor from excessive interest.”

– The Conversation of Eiros and Charmion, where thus Poe expounds such hopeful views of humans when they are faced by the necessity of being right.

Robert lacked all knowledge of such genes and how exactly it all happened, but he could assert based on the ‘evidence’ before him; from which he concludes that ‘so many strange contingencies seem to me improbable in the highest degree’.⁶⁹

My argument upon those, however, is much bolder and precise; it is not that ‘it seems to be most probable’, but that it is the only justifiable assertion – not just that ‘analogy leads me one step further’⁷⁰, but that rationality only allow us to choose analogy rather than some new unnecessary invention. It merely is impossible to defend and uphold the other one as a logical theory and explanation; and once again even if we had no fitting analogy to explain it then choosing simple ignorance would be preferable to the harmful mentality of some baseless belief – thus even if the touchstone of reason does not immediately inspire upon us the genius of truth, then at least we are provided with enlightened criticism that to free ourselves from some absurdity there is no need to fall into others equally disgusting fallacies, but we recognize that accepting the reality of our ignorance is infinitely more profitable.

It might seem at first like repeating ‘the gods made it like that’ is the most parsimonious possible thing, but rather it is the less parsimonious thing possible since the first assertion did not imply anything else; as it happened as an independent act of creation so that he has to give the excuse and invent a new act of creation for every phenomenon and thing – it gives virtually infinite many causes, all individual separate acts, rather than the true parsimony of one thing implying by necessity many others.

Establishing a rigorous definition of ‘parsimony’ would solve so, but whichever way it is conceded for the parsimoniousness of it the goodness is beyond clear that the magic creation of some species or particle or law gives no understanding of the process and could not get any worse than not only not answering but hinder the pursuit of the underlying reality.

And that is where Aristotle disfigured the sciences; by using his ‘divine principles’ which, from their vagueness, could explain everything easily – since it would not explain anything with any precision.⁷¹

⁶⁹ “So many strange contingencies seem to me improbable in the highest degree.”
– On the Origin of Species I.

⁷⁰ “Analogy would lead me one step further, namely, to the belief that all animals and plants have descended from some one prototype.”
– On the Origin of Species XIII.

⁷¹ “Aristote ne porta dans la physique, ni cette exactitude, ni cette sage réserve, qui caractérisent son histoire des animaux. Il paya le tribut aux habitudes de son siècle, à l’esprit des écoles, en la défigurant par ces

Another thing that Robert lacked was the very chronometric revolution of our past century where not only the tonic atoms were accepted, but we also both broke them apart as we watched them slowly unwinding their internal structure to more stable forms; observation which took us from the relative dating and wild guesses of stratigraphy to the absolute range of radioactive decay.

With that we can assert, or rather we are forced to assert, that the Maïas were wrong; we have seen that the world did not end in two thousand twelve, but some side prediction would not truly prove that their previous assertions were wrong – and neither did they ever predict some ‘end of the world’ on that date, contrary to what the popular ignorant hype led most to believe.

The Maia calendar does end in that date, but when our calendars are made for the year we do not suppose the world is going to end by the end of that piece of paper on December thirty one; likewise the Maia simply carved half a millennium ahead and that was more than enough work for the day – and rather than the ‘end of the world’ they would have some gigantic ‘New Year’s Eve’.

But why that date? Why precisely twenty one of December of two thousand and twelve?

To understand that we need to take a look at how the Maia counted time. They observed the stars and noticed the repeated patterns they make; they noticed the seasons of the years and all such cycles so that they build their temples aligned perfectly with it – and from that they made their calendar to keep track of it, like we do.

They had a smaller calendar for short time scales, but what we are interested in now is the long calendar.

On it the smallest unit was the day, like most civilizations around the world that was a very easy one.

The second was weirder; it was twenty days. Why? Well, the Maia liked twenty very much.

Now if you have twenty of twenty days that is four hundred; it was too much for the empirical observations of the duration of the year. So they multiplied it by eighteen to fix that, getting to three hundred and sixty; that is the Maia approximation of the year.

And then they went back to twelve; roughly twenty years and then four hundred years.

principes hypothétiques qui, dans leur généralité vague, expliquent tout avec une sorte de facilité, parce qu'ils ne peuvent rien expliquer avec précision.”

– Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain: Cinquième Époque, Sketch of a Historical Picture of the Progresses of the Human Mind: Fifth Epoch.

And so they carved their calendar for that next four hundredish years and it just happened it ended up in twenty one of December of two thousand and twelve.

How does that make us certain that we Maia were wrong? Well, to count time you have to start somewhere; and the grand party on that date would be because it was the 'fourteentieth' of such b'ak'tun cycles since the day that the gods created mankind.

Why that date? It is unknown why someone made it up at that date, but children are born learning that sacred myth and it is evil to doubt the sacred scriptures; horrible consequences are threatened to those who dare to contest the gods! And do we not see the blessings of the gods all around us, what greater proof of their might could there be than the creation before us?

And that is where we can affirm that they were wrong.

The assertion of when the gods created mankind is little more than five thousand years ago, but we also find artefacts in Egypt showing how it already had a long history and that by this time Narmer was changing that history forever as he wore his double crown unifying the two lands.

We can also mention China and other civilizations already quite formed by that time, but why would we believe those Egyptian or Chinese texts telling that date more than we believe the sacred Maia texts?

That is a very hard question, and which has no answer before it is so wrongly framed; we do not choose to believe in any of these – we do not pick that which we like best. We investigate to determinate which ones are true and which ones are not.

Without relying on what those texts are saying at all we can dig and see that those deeper should be older; we compare the style to see if it matches the known progression of those older times and so on – we can relatively tell with that stratigraphy which ones are older, and how much time might have passed.

For example sediment is deposited at a quite steady rate, if there are no catastrophic events to mess it up; and so by that rate we can estimate how old something is.

And that was how it mostly went, at the level of 'a pretty good estimate' that we could be 'almost entirely sure'; until last century when we had the chronometric revolution of the 'atomic age'.

Most people nowadays are familiar with the word 'atom' and know of those small things that we can study and even make it explode; and also about the dangers of the radioactivity that those explosions leave behind.

The explosion is just accelerating that process of the atoms radiating energy so that it happens all at once, but even when left by themselves many atoms keep on emitting that radiation at some predictable rate so that if we have a bunch of them of one kind we can tell how much time has passed by seeing how much they have radiated and decayed to another kind of atom.

And about everything we make is made up of atoms; so we have a real bunch of them. By analysing that old Egyptian pottery we can be absolutely certain it is indeed of the expected period five thousand years ago; the atoms on that pottery have decayed by just that amount, and created impurities and gas pockets within the pottery made of exactly that different kind of decayed atom.

So, if Narmer was unifying Egypt by that date then humankind cannot possibly have been created at that date; we have even older civilizations and remains that show us that humans were alive and kicking before that supposed date of creation – even if it was meant, perhaps, to mean only the creation of the Maia people we would know it is also wrong, because we find the remains of those Mesoamerican civilizations dating to older times than that.

We can double it to ten thousand years and we would find the Clovis settlements and many more; we can double again to twenty thousand years and we will find the atoms testifying to the migration of their ancestors from Asia into the Americas at a time they still could have played with dire wolves and saber-toothed cats – they were not ‘created’ and just appeared there, but rather we can see a time when no longer any human is found in the Americas and how the older ones came in slowly spreading and populating the continents all the way from our African cradle whence began our epic sapiens diaspora.

There too, of course, they do not just appear from nowhere, but we can find older and older marks showing that they came from somewhere or some form; all the day to some billions of years.⁷²

⁷² “καὶ ῥητέον αὐτὴν τὴν τῆς διαβάσεως αἰτίαν ψιλῶς, ἵνα μὴ τῆς αἰτίας αἰτίαν ἐπιζητούσης ἀνυπόστατος ἡ τῆς ὅλης ὑποθέσεως ἀρχὴ γένηται καὶ θεωρία. ληπτέον δὲ καὶ τοῖς καιροῖς ὁμολογουμένην καὶ γνωριζομένην ἀρχὴν παρ’ ἅπασιν καὶ τοῖς πράγμασιν δυναμένην αὐτὴν ἐξ αὐτῆς θεωρεῖσθαι, καὶ δὲ τῶν χρόνοις βραχὺ προσαναδραμόντας κεφαλαιώδη τῶν μεταξὺ πράξεων ποιήσασθαι τὴν ἀνάμνησιν. τῆς γὰρ ἀρχῆς ἀγνωστομένης ἡ καὶ νῦν Δι’ ἀμφισβητουμένης οὐδὲ τῶν ἐξῆς οὐδὲν οἶόν τε παραδοχῆς ἀξιοθῆναι καὶ πιστεῶς· ὅταν δ’ ἡ περὶ ταύτης ὁμολογουμένη παρασκευασθῇ δόξα, τότε ἤδη καὶ πᾶς ὁ συνεχὴς λόγος ἀποδοχῆς τυγχάνει παρὰ τοῖς ἀκούουσιν.”

– *Ιστορίαι Πολυβίου*, History from Polybius, I, and although I sum it with such a wonderfully beautiful line, it most certainly feels empty and meaningless to one who is not convinced of its Truth; which only happens by pure ignorance, but as Polybius ‘If I pursue from one cause to another I will never return to the starting point nor [will I ever get into] the theory [of the subject I desire to present]’ so that I leave to the reader to enjoy somewhere else the absolutely massive amount of information we have attained now about the Descent of Man.

So that we can indeed with all certainty affirm that the Maias were wrong, if that ‘atomic’ structure do indeed act as we have so thoroughly observed it to; and just as we are absolute sure that the Maias tale of creation is the worthless fantasy of some not-so-smart savage so too we likewise see beyond any doubt that the Hebrew mythology, which puts creation just a few centuries earlier, is identically no more than another vile and deceitful fairy tale – perhaps a worse one since we can see it was entirely plagiarized from the higher Levantine myths around it rather than any originality or art to it.⁷³

Yet, while we eventually attain that ‘brute force’ to solve it beyond any doubt, any other random person can just as well now make-up a new myth of a deity that created the universe that is just beyond our ability to ‘prove it wrong’, as today many of such silly religions still live on by going down the rabbit hole of wilful blind ignorance or with the wildest mindlessness ‘justifications’ that the fairy tale of some goat herder is an allegory to atemporal realities beyond our grasp; just as the discovery of smaller and smaller particles never seems to discourage the repetition that ‘this next one I am sure is the atomic fundamental element’ – truly following the oldest excuse that ‘as high as heaven is from the earth’ so too they always flee to the great irrationality where logic may not touch them.

Yet no ‘proof’ is required to promptly reject those lines of ‘thought’; just as we could dismiss the Mayan fairy tales, and the other Middle Eastern one, long before the ‘counterproof’ since such baseless claims lacking all ‘proof’ are equally rejected with no need for a ‘counterproof’ – there is no ‘likelihood’ to consider, but merely if it is a necessary logical assertion that we are forced to accept.

Very likely you did not see the manufacture of that computing device, or physical book, that you are reading this on, but certainly you must be sure it was not created by a god or gods; even without seeing it we know it was some human and some mechanical production line that put those circuit together and made that device – that is what the reality before us make us affirm for certain. Some, or most, might say that god created man, whom then created the device, but we do know that god did not created Allan Turing or some other man who created it; because of the reality before us we know there came from some mother and we put there beyond our knowledge some ‘first man’ created by god.

⁷³ Still when the Rosetta Stone was discovered, a giant rock telling a story in Hieroglyphs in one part and translated to Ancient Greek in another, allowing us to finally read the millenary Egyptian records it was expected to read about Moses and the grand exodus out of Egypt; but no such thing appear nowhere on the detailed Egyptian records just as learning more about the period makes it clear there could not be such thing as the description of Egypt does not any other period but that of when the forgery was fabricated – nor, of course, is it found on any other writings throughout the centuries until it was suddenly made up by the exiled Hebrews the forgeries of conquests and some ancient great kingdom and wise kings that only existed in their imagination.

But did god create water, for example? Most would readily say yes. But did god also create the hydrogen and oxygen atoms? Because then ‘the creation of water’ would be absolutely meaningless; by creating those atoms water, and ice and ten thousand other things, follow as a consequence – and if nothing else we would have to distinguish the ‘water from god’ from that which is created, and destroyed, right before our eyes, as we electrolysis water into its atoms and as we burn hydrogen back into water.

If god made some water then it should be almost all gone by now; broken down into atoms and new water formed in its place – as we study as see the conditions and past of the planet. Likewise no animal appear ‘created from nowhere’, but from some place or form; just as we are absolutely sure the hand of god did not connect that circuitry of that device we watch this so too we are that it did not create humankind, or any other animal – the undeniable reality before us forces us to admit so.

We can say, at this point, that god then created the atoms and so on; just outside our current field of knowledge thinking of believes to be safe, but that already destroys every classic religion and their creation myths⁷⁴ – and at the point we study some more we have to push god ever further back, since there is no place for any miracle and rather than explaining anything it is just a burden of now even unreal fantasies to try to explain.

It is not only an unnecessary addition, but it disagrees with reality; which denial of reality brings only catastrophics results and misery.⁷⁵

⁷⁴ “Car Dieu a si merueilleusement établi ces Loix, qu’encore que nous supposions qu’il ne crée rien de plus que ce que j’ay dit, & même qu’il ne mette en cecy aucun ordre proportionné ; mais qu’il en compose vn cahos le plus confus & le plus embrouillé que les Poëtes puissent décrire, elles font suffifantes pour faire que les parties de ce cahos se démèlent d’elles-mêmes, & se disposent en si bon ordre, qu’elles auront la forme d’un Monde tres-parfait.”

– *Traité du Monde et de la Lumière VI*, where while still somehow keeping his classical beliefs in the words of the ignorant book he had this backup plan that we could just push god further endlessly because we could always attribute it to a divine Grand Design that established those ‘laws’ so that out of apparent chaos everything would be formed according to his will from that planned initial condition.

⁷⁵ And so sadly billions still today follow the mindless Hebrew mythology; they preach aversion to the ‘barbarians’ who would do something so evil as sacrificing people in the altar to ‘their false gods that do not even exist’, but how tragic that they cannot see that it was infinitely less harmful to human kind to just have those immediate deaths than what they do – how diseases with such high and quick lethality are of little concern in contrast to those that can infect and last enough to spread to many. And ideas, memes, like viruses and all things evolve; the survival of the Hebrew myths being the worst pestilence we ever had – akin to the fungi that infects the nervous system of ants and make them move to the ideal places under leaves for the ants to die and the fungi to infect others or to the parasitoid wasps which

Nothing is more vile than depraved superstitions; where crimes are sheltered under the name of religion and where the cries of the innocent being violated and murdered cannot be heard over the recitation of holy texts with drums and cymbals – and when we dare to stand against the hypocrisy of men and their nefarious actions we are threatened to be also violating something sacred mixed with it.

But no profession that comes out of a human mouth is more sacred than any other; be they called ‘religion’, ‘political opinions’ or ‘science’ they all are equally judged purely by their content as human inventions to stand trial before the court of Reason – which while the sun of all days has not yet set can be applied to no more import task than demolishing their seats and dispersing their impious gatherings⁷⁶.

interfering with the brain of its victims make them not attack the larvae but to protect them even to its own detriment as it is eaten alive and ensuring that the same will befall its children and the rest of its species. Likewise the characteristic of the branches of that very successful religion are such literal encephalopathy that causes erroneous links between neurons making it impossible the due capacity of thought to distinguish the phenomena of reality from their inculcated fiction; worse than just dying they dedicate their lives for the sake of spreading that disease on further infecting others to the detriment of all humankind – more than just ‘portable’ it is in their mission to make sacrifices for the spread of it, and an infinitely greater harm than any gun or infectious diseases was inflicted by the encephalopathy spread by the mouth of missionaries. But enough trash-talking; formal religions is too stupid of a theme to get into here since we are having a serious consideration of the validity of statements, and those silly old myths are today quickly dispelled by the first desire to seek factual knowledge about reality – and no amount of artful argument and proof will dissuade one who just wants to ‘have an opinion’ and feel comfortable in his complacent delusions rather than any desire to investigate the truth.

“拘於鬼神者，不可與言至德。惡於鍼石者，不可與言至巧。病不許治者病必不治，治之無功矣。”
 – 黃帝內經：素問, Huang Di Nei Jing: Suwen, XI: 3 or 五藏別論, which is the best, and perhaps the only correct, line in all traditional Chinese ‘medicine’; that it is impossible to talk about Perfect Virtue to one [whose mental faculties] are chained down by spirits and deities, and that a patient who refuses treatment cannot successfully be healed.

⁷⁶ “Nihil enim in speciem fallacius est quam prava religio. ubi deorum numen praetenditur sceleribus, subit animum timor, ne fraudibus humanis uindicandis diuini iuris aliquid inmixtum uiolentus.”
 – Ab Urbe Condita, From the Founding of the City, XXXIV: 16, from which disgust to the Bacchanalia I paraphrase much of this chapter, but to the broader sense of religion in general rather than his repugnation to one that is different than his own that is ‘the right and true one’; and whose ‘noise of drums and cymbals drowning the cry of children’ used by Levius on this chapter is used by Milton, Paradise Lost I: 392-395, to criticize ‘the false gods that are demons in disguise’ when, as just said, how infinitely more harmful to humankind are his own christian indoctrinations.

“Elatus deinde ira adiecit nondum omnium dierum solem occidisce.”
 – Ab Urbe Condita, From the Founding of the City, XXXIV: 26, and this amazing line of ‘the sun of all days

So I do not say that ‘it is likely’, as Robert did on his conclusion, but that it is the only justifiable theory we can embrace; by accepting rational thought we are forced to reject those other ones regardless of if we have such beautiful alternative, or an absolute ‘counterproof’, or not.⁷⁷

And the reason Natural Selection can be so readily accepted is that it makes use of no magical force or to admit some unknowable entity; it uses entirely of undeniable phenomena that are

has not yet set’ or the English paraphrase of ‘the evening of all days has not yet come’; that is, forever until the end of times.

⁷⁷ Science used to be done by individuals who merely were curious about the world and sought to explain it better; Aristotle says the wondering about how the world works and what the stars are made of, uncovering the design of the gods, is the most sublime intellectual activity ‘even if it has absolutely no practical value to know these things’.

The scene, of course, could not be more different now; with the developments of the last two centuries it all fit together in one picture and the ‘distinct disciplines’, as medicine and physics, are all joined together by our comprehensive understand of the general framework of the universe – no longer it is performed by the followers of some doctrine or incoherent discoveries made on the backyard of a house, but funded by universities and government with precision equipment in the dozens of billions.

It is what allows all of the modern world and dictates our very future.

And so it has become a job and often said that discoveries are no longer made by an individual, but by the community and giant teams working together; and with that comes the giant modern problem of ‘publication bias’ where a thousand studies finding that something does not cause cancer are ignored, but one that finds a ‘correlation’ makes the news – private companies hire teams for that sole purpose in certifying their products by borrowing the name of ‘science’ and every researcher has to continue on publishing if he wants to keep his job, while ironically recently so many head of universities have quit that position they worked for all their lives as their papers were found to have manipulated their ‘p value’, and to even submit to any scientific magazine you need to have the approval of one of the institutions linked to it before any of the actual content is analysed at all.

And so it is well known that most published ‘scientific papers’ are wrong.

From careless bias to the very cherry-picking to produce that confirmation they were hired for it cannot be called ‘science’ at all; ‘statistical relevance’ is a primitive and non-scientific way that still rules over our so called ‘science’ not catching up to our development of the great exact framework of the world – it more than deserves the popular loss of credibility currently happening to it.

And while some helpful drugs and societal models can be found with such ‘correlations’, it is a dangerous and fickle tool; not only full of unforeseen adverse effects because we have no idea of how that reacts with the many systems at equilibrium, but also with no future for all that work as it is no base to be worked upon – a mere ‘curiosity’ to be analysed properly on the grand scheme of our advancement in understanding the world. All actual contribution to modern science in developing it further is in exact certainty; there is no ‘statistic relevance’ in how a clock or a computer work – all ‘p’, or ‘sigma’, values are nothing more than some filtering of guesswork while actual science, as argued up to here, deals with an exact description of how some accepted basic interactions by necessity after some chain of causes and effects will produce that result.

The general state of the ‘scientific community’ and the quickly increasing over ten thousand worthless papers it publishes every day is a sorry state beyond any contest, and will never improve while this pseudo-scientific methodology continues; but let us leave it be to focus back on our main point that is the questioning about the grand model underlying it all since all these others have to be built upon the Natural Philosophy of Physics.

already admitted by the very same people who advocate for other theories – it took what was already admitted and elicited the mere logical necessity of those things, namely the variation between animals, the competition that favours some more than others and the inheritance of those variations.

But the most powerful thing for us here is that it provides a mechanism; the regular motion of the seasons of the moon, the day and the year, and so many other patterns in nature, have throughout all of human time been used as the argument for intelligent design – that somehow something implied a higher even more complex thing. Which clearly proceeds ad infinity on its foolishness requiring a creator even more intelligent than the intelligent creator.

But with those three simple admitances Robert elicited all of the natural world; from the simplest cell to the most complex animal with trillions of them – and that complexity was the very opposite of a hint towards a design, but a hint to the underlying mechanisms which shaped them like that.

The likeness of ‘allied species’ and patterns when grouping things in nature reveal instead to the common simpler cause that produced them.

This is what René and the others lacked; the idea of ‘complexity’ not as something inherent, but the interaction of many factors gradually built from some principle.

He was right about heat, but he failed on his vortices about gravity; trying to solve everything with some ‘elementary unit’ that somehow still had many different sizes and shapes – and that would magically produce everything directly as designed to.

That was no selection; no means to justify complexity – and not even a reduction to a common factor if somehow all those units differ from each other.

Robert apparently did not notice the extents of his own inhuman observations; his commentaries of the ‘natural world’ included geology as much as all of living things – and although he shows no boundaries in interpreting both he somehow limited Natural Selection solely to ‘living beings’.

When seeing mountains he certainly would not for a moment think it was the work of god or even less some ‘individual species’ even before extending the notion to living beings; he wondered what forces rose those mountains and the countless ages it must have taken – when

looking at the stony field of shingles in Patagonia he would not think that was the work of some deity, but merely the product of sediments that must have eroded from the Cordillera.⁷⁸

The very composition of it being exactly the product how weaker material eroded first leaving behind the stronger rock and metals laid bare; both current forms the exact result of that selection – and how even animals could be the main selecting factor that equally selected the shape of their environment as much as their own shape were adapted to fit it.⁷⁹

⁷⁸ “Who can avoid admiring the wonderful force which has upheaved these mountains, and even more so the countless ages which it must have required, to have broken through, removed, and levelled whole masses of them ? It is well in this case to call to mind the vast shingle and sedimentary beds of Patagonia, which, if heaped on the Cordillera, would increase by so many thousand feet its height. When in that country, I wondered how any mountain-chain could have supplied such masses, and not have been utterly obliterated. We must not now reverse the wonder, and doubt whether all-powerful time can grind down mountains—even the gigantic Cordillera—into gravel and mud.”

– Voyages of the Adventure and Beagle III: XIV.

“φομὲν δὴ χώννυσθαι μὲν καὶ πάλαι καὶ νῦν τὸν Πόντον, χρόνῳ γε μὴν ὀλοσχερῶς ἐγχωσθήσεσθαι τὴν τε Μαιῶτιν καὶ τοῦτον, μενούσης γε δὴ τῆς αὐτῆς τάξεως περὶ τοὺς τόπους, καὶ τῶν αἰτίων τῆς ἐγχώσεως ἐνεργούντων κατὰ τὸ συνεχές. ὅταν γὰρ ὁ μὲν χρόνος ἄπειρος ᾖ, τὰ δὲ κοιλώματα πάντη πάντως ὀρισμένα, δῆλον ὡς, κἂν τὸ τυχὸν εἰσφέρηται, πληρωθήσονται τῷ χρόνῳ. κατὰ φύσιν γὰρ τὸ πεπερασμένον ἐν ἀπειρῷ χρόνῳ συνεχῶς γινόμενον ἢ φθειρόμενον, κἂν κατ’ ἐλάχιστον γίνηται τοῦτο γὰρ νοεῖσθω νῦν ἀνάγκη τελειωθῆναι κατὰ τὴν πρόθεσιν. ὅταν δὲ μὴ τὸ τυχόν, ἀλλὰ καὶ λίαν πολὺς τις εἰσφέρηται χοῦς, φανερόν ὡς οὐ ποτέ, ταχέως δὲ συμβήσεται γενέσθαι τὸ νῦν δὴ λεγόμενον ὑφ’ ἡμῶν. ὃ δὴ καὶ φαίνεται γινόμενον.

...

οὐ γὰρ εἰκός, ἀλλ’ ἀναγκαῖον γενέσθαι τοῦτό γε προφαίνεται κατὰ τὸν ὀρθὸν λόγον.”

– Ιστορίαι Πολυβίου, Histories from Polybius, IV, where with such unusual artistry, beauty and sense Polybius too contemplated the absolute necessities of logic before the power of All-Powerful Time; that the Pontus receives more mud than it flows out and therefore with time being infinite, and the depth certainly finite, then it is plain that even the most infinitesimal increase, it being a finite process, must eventually be completed, so that it is evident that it is happening and ‘not a probability, but a necessity born from pure logic’.

“πάνθ’ ὁ μέγας χρόνος μαραίνει”

– Αἴας, Aias, 714, truly ‘mighty time wastes all away’; although that is just some shallow remark from Sophocles devoid of the great meaningful statements above, and which on Antigone 605-610 he excepts the gods of that power ‘which leads everything into old age’.

⁷⁹ “In the morning, we stood out of the Lagoon. I am glad we have visited these islands : such formations surely rank high amongst the wonderful objects of this world. It is not a wonder, which at first strikes the eye of the body, but rather, after reflection, the eye of reason.”

– Voyages of the Adventure and Beagle III: XXII.

There are about numberless ‘species’ of rocks, but not for a second he attributed them to individual acts of creation or simply that ‘it had always been’; rather he wondered at the most literal pressures and factors, such as the elements present and temperature, that could have possibly formed that structure which laid before his eyes⁸⁰ – and that scientific mindset allowed him to suppose the unseen and predict the undiscovered by mere logical extension and justified necessity, predict the mantle and tectonic plates which only so much later would be even considered as a possibility⁸¹.

Any current formation had to have come from some previous form which through exact pressures was shaped into what we see today.

This is not an analogy of the process of selection; I am asserting that there is no justification for the arbitrary boundary so that they are precisely the same phenomenon – the integration of causes and effects that lead to the shape and building of every structure observed. No magical power or guiding force at play, but the continual interaction formed both the structures just as they themselves form the environment; all ‘complexity’ is the product of nothing more than that ‘selection’.

⁸⁰ “The geology of the surrounding country possesses little interest. Throughout the coast of Brazil, and certainly for a considerable space inland, from the Rio Plata to Cape St. Roque, lat. 5° S., a distance more than 2000 geographical miles, wherever solid rock occurs, it belongs to a granitic formation. The circumstance of this enormous area being thus constituted of materials, which almost every geologist believes to have been crystallized by the action of heat under pressure, gives rise to many curious reflections. Was this effect produced beneath the depths of a profound ocean ? or did a covering of strata formerly extended over it, which has since been removed ? Can we believe any power, acting for a short of infinity, could have denuded the granite over so many thousand square leagues ?”

– Voyages of the Adventure and Beagle III: I.

⁸¹ “A bad earthquake at once destroys the oldest associations : he world, the very emblem of all that is solid, has moved beneath our feet like a crust over a fluid ;—one second of time has conveyed to the mind a strange idea of insecurity, which hours of reflection would never have created.

...

Few cases are on record of volcanoes, very far distant from each other, bursting out at the same moment of time. In this instance, however, at the same hour when the whole country around Concepcion was permanently elevated, a train of volcanoes situated in the Andes, in front of Chiloe, instantaneously spouted out a dark column of smoke, and during the subsequent year continued in uncommon activity

...

From several considerations, which I have not space here to enter on, and especially from the number of intermediate points whence liquefied matter was ejected, we can scarcely avoid the conclusion, however fearful it may be, that a vast lake of melted matter, of an area nearly doubling in extent that of the Black Sea, is spread out beneath a mere crust of solid land.”

– Voyages of the Adventure and Beagle III: XVI.

Each detail of each striation, foliation or the smallest of stains was formed by exact factors; each rock and crystal just as the position of every grain of sand on the beach or dust in the air and the very air had all their infinitesimal atomic atoms thus allocated and placed by a quasi-invisible hand which by their weight, size, position, velocity and all other characteristic naturally selected them to the current form – each minimal detail of all things did not appear from nowhere nor can be attributed to ‘chance’ or ‘individual acts of creation’, but rather they are the witness⁸² to the sequence of factors that formed them exactly so and they reveal the actions of the forces which they are simply the current product.

Now, I do not doubt that any reader will question that all minerals are indeed ‘the product of the fixed laws of nature’, but I claim that such ‘laws’ are a harmful illusion to the reality of the identical selective processes that have produced every form.

One might easily say ‘but rocks have no DNA!’ and indeed that is true, but neither did Robert know about ‘the genetic code of life’ when he instituted his description; ‘inheritance’ does not mean ‘DNA’ – it means exactly that the current form is the product of previous factors rather than an universal pre-set or perfect Platonic form that has been established as a unique act of creation.

‘Variation’ does not mean ‘random mutation’, but Robert more than anything focused on ‘use and abuse’ as the mechanism to evolve forms; that is that the previous forms would affect the next ones.

Today we have wrongly mostly ignored that great observation in favour of the gene-centric cultists who imitating Quantum say that chemical reactions happen ‘at random’ against the very ‘laws of physics’ they follow; they make the ‘gene’ to be the ‘target of evolution’ rather than the ‘organism’, but there is no distinction or line between the forest and its ecosystem engineers – they both are causes of the others evolution and the product of those effects.

The ‘meiotic drive’ that forces some genes to be included on the gametes is the mere manipulation of the chemical gradients which decide exactly which are included on the mix – and the mere act of thinking hard releases perceptible sulphur on our sweat and changes the chemical equilibrium of our bodies, how much more all we eat, so that it would be impossible that the gamete products would be independent and immune to ‘randomize the genes’ ignoring the forces that promote or forbid, that exactly decide, the chemical bonds that occur.

⁸² “Onde, con ciò sia cosa che ciascuno effetto ritenga de la natura de la sua cagione.”

– Convivio, Banquet, III: 2, ‘each effect retains something of the nature of its causes’, Dante attributes to al-Bitruji.

That is, a ‘mutation’ or ‘replication failure’ does not happen magically ‘at random’ or ‘by chance’ but have a definite cause on that chemical gradient which guides the reaction one way or another.

The acquiring of our many copies to digest starch or the rapid skin colour that few generations suffer when changing to a place with less ozone, or every example of rapid evolution, could never be produced by some ‘random mutation’ that somehow in so short a time killed everyone who had less starch-digesting power or making them fail to reproduce; rather it is clear Robert was still right on his ‘usage and desuse’ and that the mere constant usage of the gene changed the epigenetic enough that the distorted chemical gradient of that shape gave it a priority to be passed on during the formation of gametes – the entire population convergently developed those extra copies by living in a way whose chemical gradient selected for the passing of said gene.

The explosion of complex life in such short a time, as the Cambrian, is the exact result of that ‘greater power of selection’ where the heavy *usage* of the ‘chance mutation’ led to an epigenetic shape that favoured the passing of that gene; use and desuse is almost entirely what produces all improvement and perfection of any new characteristic – this modern complexity of life which not have arisen in a trillion years if it depended solely on some ‘random mutation’ each time slowly cultivated by many generations until becoming fixed and waiting for another such ‘luck shot’.

But this lately degenerate state, ‘the gene-centric view of evolution’, of our biology is a different fight from our main enquiry today; so I will leave it at that⁸³.

⁸³ I quoted that wonderful line of Dawkins earlier and his opposition to the harmful unreality indoctrinated by religions is praiseworthy, but his book is an awful retrocess to the science; where he himself becomes a blind cultist deifying the genes as some indivisible species of selection to replace the ‘organism’ as species – when, as exemplified just above, both equally influence selection as are also selected by that environment they dwell in. The mere usage of its limbs or its brain and all stimuli, all an organism eats and how it lives affects the chemical balance within it; and that environment selects which genes and mould the sequence of genetic material that is passed on as much as some organism in an outside environment is selected by those pressures.

“The pruning shears to–or unleash an elephant upon–a thornless cultivar, and thorns may magically reappear.”

– The Ghosts of Evolution IX.

I have no idea what she was thinking when she made such bold revolutionary claim nor did she deign to elaborate upon it; to my mind she said so casually with no mechanism in mind besides some vague metaphysical notions in some belief of ‘natural laws’.

I, however, do propose that pruning or such damage to leaves do indeed cause some reactions in the plants; which is just stating the obvious as no one will deny that such a loss will disturb the chemical gradient within the plant and thus its behaviour, as growing new leaves – where I state revolutionary things to our degenerate modern view is that such chemical cue will be worked upon by evolution.

The chemical unbalance will affect in wildly unpredictable ways that epigenetic environment that determinates gene expression; one of those ways, then, will be beneficial to the plant such as the harm of leaves trigger affect its epigenetics in such a way that it favours the production of such defences as toxins and thorn

The genes are selected by the chemical gradient of their products and placement by usage, as ‘the unit in a bigger environment’, just as the general organism is ‘the unit in a bigger environment’; and that river or forest and collective life that serves as ‘the environment’ is likewise no more than ‘an unit in a bigger environment’ when considering the evolution of such ecosystem in view of the climate and the greater picture.

That ecosystem changing throughout time is clearly an area of natural selection adapting and changing its many parts, but it has no single ‘DNA’ of the ecosystem; simply the collective factor of all its individuals driving it this or that way.

On the same manner it is sometimes said that facing inhospitable environments viruses evolve; and then that ‘it is weird to say that because how could a non-living thing evolve?’⁸⁴.

That very silly questioning is made upon the concept of ‘life’; for what is life?⁸⁵ Some perfect Platonic form of all things that inherited that ‘energy of vitalism’? On the frantic search for such

structures or convoluted branch arrangement just as the chemical gradient pulls the DNA replication towards such reactions mutating the gene to produce those codons – thus are traits highly variable and easily perfected further by selection in a short time by the repeated stimuli, that is ‘the laws of usage and disuse’ of Robert, so that pruning might indeed promptly reawaken thorns in a species that has grown thornless by the lack of that stimuli.

Not because ‘thorns did not matter and so it was selected out by random mutations’ nor some ‘random mutation that by chance repeatedly improved thorns and only the thorniest survived’ which are perfectly possible mechanisms, but would take nigh forever; such simplicity is hard-pressed even in explaining the simplest organisms, and never would achieve a tiny fraction of the complexity of modern living beings – rather it is that infinitely more complex, and efficient, fine-tuning of an organism by how its every stimuli constantly drifts it towards perfection that would be the change that selection favours over any other, and the means that both allowed the development of this complex multicellular life as what allows this fast evolution omnipresent happening before our very eyes.

That simpler mechanisms of course undeniably happens, a ‘luck mutation’ caused by some unexpected factor, and it is how simpler life-forms evolve while might still be important in how some new trait begins, but it is approximately irrelevant in the process of developing traits into complex organs and shaping organisms into their highly perfected forms.

Vide the first section of *On the Fate of Species* to properly see how there is nothing that Selection favours more strongly than ‘better means of selection’.

⁸⁴ “We can try to kill them with chemicals or UV light, or design vaccines to thwart them, but even then, they often evolve to evade our efforts. Except, all of that’s kind of wrong, or at least really weird to say, because most scientists don’t consider viruses to be living things. How do you kill something that is not alive? Or, how can a non-living thing evolve?”

– it is said in Scishow in an episode named ‘Are Viruses Alive?’.

⁸⁵ Let us take that insufferable question of our modern degenerate pseudo-discipline of ‘Philosophy’; ‘what is a chair?’. Plato deals with answering that; and answering what is virtue or any other thing. He says that a chair is something that partakes from the perfect form of ‘chair-ness’; there are many different things we call chairs

because some partake more and other less, but what makes all those different things all be chair is that they do partake of that form. The basis he is coming front was to his time so obvious that it did not even need to be said explicitly, but even without the due background it becomes obvious for any reader too by seeing how he often does word-plays as if that was some ultimate proof of what he is saying; and that is because he never even questioned the idea that the gods created everything, including language, so that the gods themselves made the word 'chair' and thus if they made it then it was because they had that perfect 'chair' from which the mortal craftsmen simply imitate that form of chairness that exists within their mind since their mind comes from the divine – and thus that is what makes that a chair, because the gods created 'chairness' and made the word 'chair' to match that perfect form thus any object that is made to resemble that form partakes of chairness.

Now, what about a 'computer'? Would he dare to say that a computer is that thing which partakes from some perfect form of computeness, as defined by the gods? Today it is obvious to all how language changes nonstop even without the actual knowledge of linguistics or of how those 'perfect Greek words' were just a corruption of the older proto-indo-european with other words made-up all along the way; made by necessity as it was more convenient to have words for things, just as that led to the invention of language itself, just as many words died out as it became less relevant to differentiate all the ontogeny of our animals having a name for each genre at each age or as we even lost different kinds of pottery, baskets or what so ever else we did.

Thus a 'chair' is what so ever we define it to be; we have no inherited the languages from the gods for there to be the perfect form of chairness, but we made, and make, those ambiguous concepts up for mere convenience at our leisure – what is today a stool, a bench or even a sofa might just have been a 'chair' at some point, and today all these words exist solely by our convenience in quickly summing a general description of some arbitrary object.

So too is 'human', 'justice', 'species' or 'life' just made-up words to quickly transmit that ambiguous concept; asking 'what is a human?' or 'what is a species?' or 'what is life?' is as meaningless as that insufferable 'what is a chair?' – those words do not correspond to some perfect form as established by the god or to such tangible 'element of reality', but are merely a general ill-defined concept that we made up at our leisure.

As we shave a tiny splinter from a wooden chair, does it approaches more the perfect form of chairness or departs from it? No matter how close we look there is no point where a piece of wood or stone approaches 'chairness'; its atoms merely changing position and there is no point where it transform into a 'chair' or ceases to be something, but a quasi-infinite gradation of all the places where those atoms can be arranged – so that it is the division of a 'chair' or not only exists within our mind as what so ever we define it to be and not something to be found to exist in reality. As the sacred ship of Theseus which being in constant use was already repaired so that all its parts have been replaced by new ones; 'is it still the same ship?' is the famous question, but which we see how meaningless it is as the answer, again, exists only in our imaginary as what so ever we define as 'sameness' and 'ship', and a imaginary distinction made by us it does not correspond to some 'element of reality' that can be shown to differ from all else in any way.

Aristotle and Hobbes have gone about uselessly inventing distinctions for each name as if corresponding to such pre-defined divine forms and Stuart Mill went straight to the 'necessity of a theory of names'; so that here I merely went over this most stupid talk of 'what a name is' – namely, an arbitrary sound or sign to any concept we decide to make up.

Indeed worst blame to Aristotle who at the very start of his *Categories*, *Κατηγορία*, so beautifully answers the question by treating linguistics as some object-oriented programming describing as every words is some instance of a greater class, as of a substantive or a verb or an adjective, whence it inherits its functions of gramatical meaning and declensions; which truly indeed that is all words are – any arbitrary variable which we attribute any value we desire and not part of the 'source-code of the universe' as elementary particles or perfect Platonic forms.

Truly, 'man is the measure of all things'; and it pains me so much that the works of Protagoras and Gorgias have not survived.

mystical energy that the cultists did to try to maintain their baseless preconceived notions after the concept of evolution became undeniable they found simply that, of course, there was no such singular material apart from all the rest of nature that the body uses and all it produces are chemical compounds that can be gotten just as well from any other non-living source; it is not a distinct and unique phenomenon but rather a collection of atoms entirely subject to the field of chemistry and like every other word 'life' does not represent or correspond to some 'element of reality', again as some 'perfect Platonic form', but it is a made-up word for the arbitrarily defined concept - and why would then some process, like the cumulative consequences of cause and effect in a feedback loop leading to increased complexity, only arbitrarily act upon that 'biocentric' view and not on every other chemical process likewise?

Truly genes do suffer selection; by being very beneficial and thus leading the individual to reproduction that will preserve it, by being useless and have no importance if the offspring carries it or not, by being like that meiotic drive pest and like a virus being selected merely because it benefits its own reproduction rather than that of the host and so on - but organisms, that collection of genes and the structure they build, are not any less selected for nor any less important than that 'gene selection'. So too the environment they live in; the shape and every characteristic of a forest is selected for by the 'genes' that so mould it - that is, by those organism that live in it.

So, too, if we go back to genes there is nothing special in how they are selected for and how every other molecule is selected for with the most stable lasting longer; or how the most unstable atoms or subatomic structures are selected against breaking apart - all are part of the exact same process.

Seeking 'the origin of life' seems to refer to something pretty obvious, but that worthless intuitive and ambiguous concept breaks down once one tries to rigorously define it and thus too the question, which seems so direct and precise, turns meaningless; rather akin to asking 'what is the

What we call 'alive', too, is entirely arbitrary and vague at our whim no different from what we call a 'chair'; as I might call a 'stool' as a 'chair', or as poetically any possible thing that is sat on is often called a chair - as useless as it is to discuss with someone if something is or is not a chair so too it is to discuss if something is or is not alive, as both are made-up concepts for whatever we thus at leisure define them to be, and not a tangible real thing distinct from all others which we can point out.

“「そこに膝を折って頭を乗れるんだ。四つん這いになれ」

「はい」

。 。 。

「この場で椅子となれ。理解したな」

「はい！」”

- オーバーロード, Overlord, IV: 5: 1, which scene got stuck in my mind as I tried to say how anything can be a chair; where thus Momonga commands Shalltear to 'become a chair' and accordingly she quiveringly does crawling on all fours so that he may sit upon her back as she is made into a chair.

origin of chemical reactions?’ then, but that too is not some unique ‘law of nature’ and merely our arbitrary way of referring to the inter-atomic structures that are formed when the conditions, the pressures of its environment, select for it – the question goes down to ‘what is the origin of those atomic atoms’ then, but so on down it goes and saying species of animals have been designed to be just like that is no worse of an explanation than saying the atoms or some other ‘elements’ are thus some random collection of ‘elementary particles so designed as fundamental to the universe’.

I have mentioned ‘inheritance’ as the very lack of that perfect form to instead be the result of cumulative changes; the ‘variation’ to be not ‘a random mutation of DNA’ but the building up of a structure in response to the cumulative causes of effects received – and the last of the three necessary conditions for ‘Natural Selection’ to be elicited, ‘competition’, is resumed as ‘the survival of the fittest’ as they produce the ‘new generation’ which ‘inherits’ his fitness, which is the exact same process of how unstable structures decay, and thus ‘leave no offspring’, while stable formations last and continue on affecting the natural processes and making every other result ‘inherit’ from his contribution to it.

As said life is much more organized; the entire difference is how complex it is so that the selection exactly of ‘better means of selection’ provided the usage of DNA and the epigenetics that govern ‘use and desuse’ – the exact same process that in less complex forms, like rocks, produce every landscape and select for the exact position of ‘every striation, foliation or the smallest of stains’.

V – Logical Succession

Let us appreciate some warm little ponds as we join all the pieces we now have; since I was rather through and boring on my endless tautology of the same argument – so that I would be rather appalled if you have not yet elicited the principle of Logical Succession.

As we stand before the ponds⁸⁶ we can ponder great many things; and if you look at certain angles you will notice a little bit of oil floating on the surface of the water – these oils, you might have already conceived on your own imagination, form perfect circles.

No one had to draw them to be circles, but they have become so purely out of ‘arithmetical necessity’; they have been selected to that form as the most stable, they vary into ellipses and shapes as the environment effects other unilateral pressures upon them and they affect the flow of water, transfer of heat and many other process just as the environment shapes it – and eventually it will take on some other less or more stable form that will inherit those effects it both suffered and caused.

It might sink; and rather than a circle it becomes a sphere – a bubble slightly separated and more stable than the outside environment where the phosphoric salts and azotic compounds might form proteins and, like crystals, organize themselves into self-repeating patterns of which only the most stable lasts and continue on.

Rather than focusing on that runaway chemical reaction, which behaviours are well accepted to suffer Selection, let us see how it was no ‘luck’ or ‘chance’ that it formed, and that ‘suddenly started the process of Selection’, but that it all were the product of the same identical process acting and selecting everything to that configuration.

The presence and disposition of the elements and the temperature define completely what reactions occur; any change of those and different results are selected for.

So why was the pond even warm? Had it been colder or hotter the very same elements would form different compounds; or continue as a soup forming little to nothing new at all.

⁸⁶ “It is often said that all the conditions for the first production of a living organism are now present, which could ever have been present.— But if (& oh what a big if) we could conceive in some warm little pond with all sorts of ammonia & phosphoric salts,—light, heat, electricity &c present, that a protein compound was chemically formed, ready to undergo still more complex changes, at the present day such matter wd be instantly devoured, or absorbed, which would not have been the case before living creatures were formed.—“
– To Joseph Dalton Hooker 1 February [1871], the famous speculation on his letter of how life could have began.

Was that pond just some ‘fluke of nature’ and ‘random coincidence’, as so foolishly many today still use to describe it and skip right to the ‘first life’?

Well; why are the poles freezing cold and the mantle burning hot? Was that just a ‘coincidence’ and ‘fluke’? Why was not all the heat concentrated on some ‘giant heat lake’, like some heat ocean, and why are the top of mountains colder; is it the design of the gods and their thermodynamic law intelligently designed to accommodate the world for us?

As impossible as it is to attribute those to ‘independent acts of creation’ or ‘random luck’ so it is to the pond; ‘heat’, the simple motion of particles, ‘compete’ with each other and every other particles forming structures exactly as selected for – the heat distribution around the world was the exact product of that selective pressure shaping them so.

Thus as we watch the cumulus clouds flashing in the distance we know it is no design that guides and shapes the lightning, but the charged particles individually are simply shoved to the path that opposes them less and end up flowing with some imaginary order and purpose; then over eight hundred thousand times slower comes thundering the sweet deep melody of that heated air that compressed itself to the point of explosion once the external pressure impelling it became less than its internal one – all sharpness selected out of the reverberating heavenly symphony as it interacts more and loses energy faster than the deeper tones.

And so too quasi-infinite colours attack our eyes in regular pulses of the most varied hues; from the limits of gamma, where the unstable photons just might collapse into ‘solid’ particles due to their greatness, to the extreme lowest radio, where at some point the released energy is even insufficient to form the discreet structure of light and must rather instead form exoteric particles not yet known; the environment selecting thus and likewise as the flashes traverse around the entire globe in instants it hits us again, but again with those separated bands where the sharpest most energetic ones have both bent more and faded due to the selection of the most stable on that environment, the less interactive, so that on the exact order that prisms separate their gradation of colours so too the atmosphere in order selects them to extinction – and thus as the rain clears and we look up at the skies seeing how the warm rays of the sun struggle fitfully as they cut and dissipate the fog and clouds we observe once again that dispersion of the high energy blue while the blessed rosy fingers of Aurora almost unimpeded caress both immortals and men.

‘Each individual particles following the path of less resistance and collectively giving the illusion of law and order simply because under the same pressures they form the structure selected for.’⁸⁷

⁸⁷ I must deprive the reader from a properly long and detailed description of all mechanical processes of our atmosphere, ocean and earth which create all climates and meteorological phenomena, since no sane mind

We see the result of rain flowing down the drain and forming rivulets that fork all as if guided on the same direction where their many-forked paths coalesce into mighty streams which cut the visible path of erosion on the terrain; to which Aristotle said the ocean is salty because the rivers carry mineral salts from the earth to that lowest point where they all amalgamate and we call that great lake the ocean – was he right?

Partially, or rather ‘yes, but for the wrong reasons’; or if we are playing the role of sufetes then ‘no’ and we condemn him to this very public execution I have endeavoured to present⁸⁸.

His reasoning was, as so utterly loved by Chinese philosophers, that ‘it is the natural tendency of water to flow down to the lowest point’; and when we by contrivances of mechanical means make it go up pipes he says that ‘only by violence it moves against its natural motion’ – which of course, just as his ‘many types of motion’, is even dumber than what it sounds.

Like all things it goes to the path of less resistance being select by its surrounds to that courses which opposes it less; it flows down when the force of gravity, or what so ever other that defines what ‘down’ is, is stronger than all others that hinder it so that there is less resistance in going down than being still, but up the pipe it goes when doing so is easier than going down through the pump, going outwards through the duct or resisting the water pushing it from below – and so when merely exposed to a thin glass tube it goes up by itself or sweat clings to our skin without falling further it behaves so because the adherence to such material is stronger than what pushes it down just as when dropped upon a table it forms a dome rather than flowing down and spreading flat to the lowest points since its coherence is stronger than any other current force in its environment.

Every time it is merely selected thus to the form that the environment shapes it to be; just like all others phenomena, rather than any ‘natural motion’ or some ‘hydrodynamic laws’ inscribed on the background of the universe specially designed for that phenomenon – nor are those guided

brings any contention nowadays of their exact mechanical nature rather than the blessing and punishment from gods; on *Le Meteores* René describes his imagination on the origin of wind, clouds, snow, rain, tempests and so on and while much better than the similar work of Aristotle, the too fanciful and insane *Μετεωρολογικά* to be worth any note, I would recommend rather any internet media about the immense complexity of our atmosphere and the equilibrium of the many cycles of capture and release of water, carbon, nitrogen and so on.

⁸⁸ “In quo confiderem equidem causae meae, etiam si non apud Romanum sed apud Carthaginiensem senatum agerem, ubi in crucem tolli imperatores dicuntur, si prospero euentu, prauo consilio rem gesserunt.” – *Ab Urbe Condita*, From the Founding of the City, XXXVIII: 48, where the Carthaginian senate will crucify their commanders regardless of a successful outcome in battle; simply by the soundness of the method and strategy employed in not being reckless suffering unnecessary dangers which render a victory less profitable and a defeat more costly.

by the qi of the earth ascending as bright yang and the qi of the heavens descending as dull yin as some magic that creates the clouds and make it rain⁸⁹, but an entirely physical mechanisms that step by step merely thus shoves thing to that place as the path of least opposition.

All of these, just as all other phenomena, are not distinct and unique, but the very same process endlessly going on; and all shape and structure we see was not happenstance of ‘chance’ or ‘luck’, but it testify for some previous environment that selected all its individual parts to exactly that form – all division entirely arbitrary and fictitious that should be made simply for the convenience of communication, and not to impair the mind as if those were perfect Platonic forms intelligently design as those unique species of phenomena or structure.

Why was then there phosphorus, nitrogen and carbon on the pond? Why was there a light ‘air’ atmosphere above, the pond in between and the earthy minerals below? Was it ‘luck’ that most of the iron sank to the core of the planet?

Or is it undoubted that the stratification of the planet happened by the exact selective pressures of ‘light’ and ‘heavy’ going to the most stabled where they were most fit, of ‘hot’ and ‘cold’ and all other factors that flee our list, but which we do not doubt were there? Just as the proto-planetary disk, by following the path they were shoved to by its surrounding, collapsed with these elements here and not for other planets; each grain of elementar thus accreting into different bodies not by any collective design but each individually simply followed the path of less resistance – what made those whirl into the Earth at our dawn, forming the sky out of a vaporous flame, and what made the dark universe yawn, thus forming the black planets to roll without aim? I say that is yet unheeded, that it was Selection without knowledge, lustre or name⁹⁰.

The selective pressure of greater force; moving down the gradient whithersoever they are shoved.

Such ‘non-living’ things clearly shape all of life; the ‘heat structure’ itself defines the air currents of rain and weather patterns which, as on the aforementioned mountains, define exactly where the conditions for chemical reactions are present – where ‘life’ can thrive. But in no different away

⁸⁹ “故清陽為天，濁陰為地；地氣上為雲，天氣下為雨；雨出地氣，雲出天氣。”

– 黃帝內經: 素問, Huang Di Nei Jing: Suwen, V: 2 or 陰陽應象大論, which ancient texts about nature thus describe the seasons, natural phenomena and human health as, in some unexplainable way, being produced by such a cyclical motion of the qi of yin and yang.

⁹⁰ “I have whirl’d with the earth at the dawning,

When the sky was a vaporous flame;

I have seen the dark universe yawning,

Where the black planets roll without aim;

Where they roll in their horror unheeded, without knowledge or lustre or name.”

– Nemesis, from Phillips.

the cyanobacteria selected for our current third atmosphere; the azotes, as so many other events and the small scale blooms, cooled down the world and selected for a different weather – or more clear than all we today on our current climate crisis with our actions affect the selection of the weather as much as it selects for every other living thing.

There is certainly no perfect form of ‘life’ and ‘vitalism’, but it is ‘under the same laws’ that every other chemical reaction; the invisible arbitrary barrier of names does not restrict ‘Natural Selection’ as some special and unique event – but all things collectively are factors defining our ‘environment’ and in turn being selected by it also, that is the mere logical succession of causes and effects.

When we see a perfectly symmetrical crystal it was no ‘luck’, but a show of the selective pressures it suffered; and a different structure and forms reveal also the different conditions it faced since both have been crafted by the conditions of their surrounding environment selecting for that form – the ‘unit cell’ of a crystal affects the environment and replicates itself if it has the right conditions do so, where the greater crystal affects the environment even more while less stable crystals break back into its components leaving only those more stable, or fit, shaping the ecosystem to new conditions.⁹¹

Or perhaps the crystal is not perfectly symmetrical, but shows the mosaicity of changing conditions or conflicts with its mirror image; so that we are pointed at the different selective pressures of that environment that formed it – it should be beyond any geologist to say it could be ‘random’ rather than some influence, and just likewise the chirality of our known biomolecules

⁹¹ Leeuwenhoek had fun analysing many strangely shaped ‘coffee crystals’ and supposed they were then composed of some smaller base unit that had that same shape and which by addition of more units produced the same shape in a larger scale; basing such assertion on his observations of sea water where the precipitated salt crystal was always cubic although their size varied and so he could watch them growing from a smaller cube to a bigger one by salt somehow always following that pattern as new particles were added to it.

Today we know those salts are ionic bonds of usually a negative halogen with the alkali metal they stole the electron from; and that thus they create such polarity which serves as a selective pressure organizing the other positive and negative particles to be aligned by neighbouring its opposite charges as a single greater structure repeating itself on that same pattern – likewise the self-replicating molecules of life bend and twist forming the gradient that selects the particles around to organize as a copy of itself, and when any disturbance messes that gradient we have ‘mutations’ in an imperfect copy of the original.

Which, of course, can be more or less fit in producing the structures that allow it to gather the food particles to copy itself, and our classical Natural Selection follows on; but equally disturbances introduce impurities in the crystals, or any other structure, changing its behaviour and selective pressures on the environment – as we do indeed dope them ‘artificially selecting’ for some exact behaviour, as the very exact electron shell gap that is producing photons of the correct strength to incite the correct colours on my eyes from the electronic screen I am using to write this right now and as the copper within the silver chloride crystal of the lenses of my glasses which allows silver metal to form and darken the lenses when sufficiently strong light throws an electron at them but which copper will eventually re-organize the crystal back to transparency.

was no 'luck' but the product of the environment selecting such molecules well before 'life', the further more-complex selection of that new environment, was formed.

'Was formed' indeed for it did not 'begin' at some point as something new and unlike everything else; it was formed from a selective process and merely continued it on iterating it with ever more complex 'units' of organisms.

Our natural satellite itself is not of a 'random composition' or the shape of its rocks, now frozen when before molten, and craters by 'luck', but reveal its previous existence as part of our planet and the manner of its Fission from us; so too all mountains and rivers and lakes do not appear 'spontaneously' or 'at random', or even if that water floats into a cloud, but it is an exact process where each of those forms of water diverge from the other merely as the result from many 'forces' interacting to shape an environment that selects for such a structure.

From that selection came the amino acids for life and indeed it brought some wonderful selection capacity as never seen before; forming greater complexity and at a faster pace than any other 'dead' material - yet in no way 'unique' or 'distinct' from the previous process.

Merely more complex and faster; just as actual multicellularity and sight kicked off yet another explosion in the complexity of the 'living' systems, but in no way unique or distinct from the slower and simpler processes before as those of single cells, floating acid backbones or mere weather and rocks - or that which certainly has, and currently is, formed all photons, atoms and their inner parts.

Let us look for a moment at the gorgeous reconstructions that we have today of tiny feathered velociraptors; in how far from the popular representation as empty monsters we now have so many documentaries showing their probable behaviour as a real animal - the migration patterns over ancient Asia and the intelligent creatures using of pack behaviour to feed their young.

But then we remember they are dead.

All those cute young creatures we became so attached on the show can be followed in our thoughts where they might have or have not managed to reproduce to the next generation, but eventually we know they failed; the long chain broken and the lineage ceasing to exist.

Was it then 'all in vain'?

What about the remaining well over ninety nine per cent of all 'species', which not only have lived and died themselves but have gone extinct; was it all in vain and having failed to 'pass on their genes' they are insignificant in the history of this planet?

Very far from it; because are here – and we are the product they left behind.

All those extinct things have exerted pressures all around and moulded those who survived; leaving their mark in us, and everything else, even though they ‘failed in passing on their genes’.

Likewise the very climate selected for not only the ‘genes’ of living single organisms, but the entire community at large and the smaller processes below; the rise of the Andean range modified the creatures as much as the desertification behind it and the meandering of what would become the mighty Amazon – our great forest is quite a modern feature and only several factors came to form it. Just as the great collective shape is the product of the selection of the ‘individual’ living things there so it is of the genes within the living things; and so it is of the very chemistry that form those genes and weather – all contributing to the final result, and no distinction of something being immune to selection or being the most basic block that forms it while being not affected itself.

Meanwhile far from any orogeny rising the ground the mountains here on my backyard, the Chapada Diamantina, was carved through billions of years on the very craton; the young Himalaya in comparison have affected life just as much as the aridification of Asia changing the landscape as much, or more, than the life itself – each former shape not ‘a failure’ for its ‘extinction’, but a contributor to the result we have today. The Gobi desert itself now blowing rich nutritious sand over the ocean ecosystem; the Sahara blowing on the contrary side feeds the Amazon – the sea currents themselves deposit the ocean-nurtured diatoms upon the Amazonic Basin.

Or if we look at our direct humankind; with our modern more complex environment of political society – just another layer of the very same phenomenon. Newton, for example, left no children; his lineage was extinct on himself. Did he fail then to his contribution to the evolution of humankind? Far from it he is often mentioned as the most impactful man in human history; more than any direct inheritance of genes could do, that coherent chemical reaction known as ‘Newton’ changed the course of humankind and, although gone forever as his flame of coherence extinguished, the effects he left are still so overwhelmingly present everywhere – through ‘memes’ which exert so much selective pressures that the modern world looks unrecognizable from all past ages.

Not only within society and our highly engineered homes, but the entire planet is quite affected by our usage of our scientific progress; both the current mass extinction on all spheres of life, the changing of landscapes as that life leaves or we shape it and the adaptation of many ‘fast-evolving’ creatures to that new world – we have done it through that ‘meme’, not ‘genes’. Just as many past mass extinctions had been caused by the weather and geological phenomena; they are all factors shaping our world – every shape, be it a rock or a ‘living being’ or an idea, is the product of interaction which are the pressure to selected for that most fit.

It is an arbitrary, and meaningless on the greater picture, to limit 'natural selection' solely to genes or 'the organism'; pressures that shape that very environment into more complex structures – it is merely the result of compounded causes and effects.

'Genes' are just one small step of that process which extends staggering far below and above it.

The 'tree of life' organized by that beautiful chain of 'common descent' is as wonderful in utility as beautiful in understanding the general path all things took to get to their current forms, but thinking that as the complete picture, that is the specialization of animals leaving offspring where the most fit live on, is as wrong as the infamous 'March of Progress' of a straight-line of evolution.

Sometimes branched parts, 'different species', actually 'fuse back' and have viable offspring creating an uncategorizable mess; as we have long been doing and have some weird bad nomenclature to organize our 'hybrids' – but there is nothing unique or special about those, and any 'rule' that is broken merely shows that it was a mistaken one that failed to capture the greater principle ruling over all cases.

Bacteria is well known for having many circular genetic codes called 'plasmids' which they can pass between different species completely changing that supposed inherited blueprint of life passed down through descent; simply by throwing such plasmids in a solution and shocking the bacteria there we can introduce into them the genes we want, as we often do to produce certain substances in mass, so instead of butchering pigs to extract the insulin they produced we now introduce the genes for the bacteria to manufacture it for us – as we humans, and all other animals, are no different in the fickleness of our supposedly inherited blueprint, where an entire class of viruses, 'retroviruses', directly deals with changing our DNA and that of all our offspring forever.

We did not need to 'inherit' it; that genome was not a product of the tweaking of Natural Selection – it was a mere chemical attack that forever changed our 'species'.

What is all life is; there are no special rules governing the genes or any other characteristics – it is merely an extremely stable environment that we create in order to preserve the best it can the original form, but as seen all we do and eat change that environment and creates the gradient for selecting what is passed on and as we go down to unicellular organism we see they are merely much more exposed to external disturbances on their tinier and tinier environment.

Our fathers and such line of descent are just one part of the many factors that shaped us; and as we genetically engineer our race it will be merely intentionally and with foresight doing what has always been happening haphazardly with blind Selection – not only the 'natural selection' of 'genetic inheritance of random mutations', but seamlessly going into crystals and all other chemical reactions as simply that shape and form that all factors involved selected for.

Sometimes a virus becomes the most powerful factors and changes thus the genome; other times a simpler toxin or cosmic ray knocks an atom out of its order – and yet others an idea, as in Newton above, can be the most powerful factor changing the shape our species.

Just as all other phenomena, whatever factors collectively are the strongest acting on it so will determinate how it will be pushed and what form it will have.

Any ‘shape’, the current state of any system, we see come from a cause; and the only ‘explanation’ is a logical succession of the many interactions leading to that effect.

Biology usually happens on those very controlled environments, but that is just a physical barrier that maintains that long principal chain of effects of inheritance as the strongest acting factor, a much more sophisticated means of selection⁹², and not any unique and distinct process from how any planet and rock or galaxy and molecule came to have all their properties and characteristics.

We readily agree that molecules are not ‘atomic’, but form and are broken apart in perfect stoichiometry based on the conditions selecting for some reaction or not; and all produced, ‘alive or mineral’, is the result of that continual selection and iteration of all units on that environment.

But where did such tonic atoms possible come from? We do already make stars their crucible and we do already admit the obvious that less stable ones decay and the most stable last, but how could it possible be justified that ‘then selection ends’ and all the stars did was to push together ‘the elementary particles’ as the individually created species that form it? And that some inherent ‘strong and weak’ forces magically keep them together because so it was intelligently designed?

The gorgeous conclusion of Robert to *On the Origin of Species*, the greatest and most important work produced on humankind thus far, sadly errs on the very last; since life was not ‘breathed into a few forms or into one’ – uncountable many could just as well still being produced and that not by any ‘fixed law’, but merely by the unending selection of the chemical reactions.⁹³

⁹² And the evolution of this brain of ours, a computing machine able to achieve foresight, is a much more sophisticated means of selection, both in the ‘selection of ideas’ as literally engineering our genome to any shape we please, than our previous heedless ‘Natural’ one; of course our social environment being blind to that is still stuck in its most primitive infancy as we live in this disorderly and mindless political guesswork with the crudest and most savage ideas of government, but which disease I try to cure by reforming Economy and Legislation as exact sciences, through Logical Succession, on my treaty of *On the Fate of Species*.

⁹³ “Having been originally breathed into a few forms or into one; and that, whilst this planet gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.”

– *On the Origin of Species* XIV, the last paragraph.

On the Newtonian view long established he failed to interpret his geology as the very same process; and to elicit further that the so called 'fixed laws' are the exact same 'fixed species' which he so hard fought to banish – and thus he did not extend his discovery besides the mere arbitrary process called of 'life', but just as the idea of 'immutable species' hindered the field of biology from fruition for so long so has the idea of intelligently design immutable 'laws' and 'elementary particles' as a 'valid explanation' condemned all our modern Physics to this sore state.

Every intellect and reasoning bear witness: There are no gods nor 'God'; Muhammadun made up Allaha.⁹⁴

Who then wrote the 'laws' of motion, thermodynamics or gravity?

Even the most simple interaction of macro-objects is indescribable by any simple equation; there exists no 'elastic body' and all production of 'heat' and emission of energy as photons is not a failure and extraneous things, but it is all indivisible part of the same single process arbitrarily separated – the exact configuration of all its part will determinate the complex result and any 'law' is merely a tool of approximation, or which was such legislator and who is the king of nature for the rock to obey him?

Such myriad of admittances of magical powers and intelligent design are completely unnecessary and unjustifiable; they are so complex on their multitude of characteristics, conditional interaction and so on that they are rather themselves phenomena which require a description and explanation themselves.

There never was justification as currently there still is no reason to say that the complex structures we observe are atomic or 'elementary particles', rather it is inadmissible to do so since far from good it is the convenient answer of magical properties hindering our own understanding of the underlying processes.

When we dive down into abyssal depths we find many new creatures we know virtually nothing about, but far from going back to zero supposing that those are then unique species separated from all the rest of known phenomena we promptly apply the logical thought of how those 'unique' things evolved from some ancestor; how could we possible observe the tonic atom and say it is 'indivisible' against all other experiences observed in nature? How after being clearly wrong are we going to say it again when observing the inner electrons, protons and neutrons that they are all indivisible? After cracking the nucleus open how do we now say that there is any

⁹⁴ "لَا إِلَهَ إِلَّا اللَّهُ ; مُحَمَّدٌ أَعْتَرَى اللَّهَ"

A little wordplay where changing one letter, two grammatical cases and a noun with its coadjutant parts for a verb suddenly makes a true statement from the 'testimony', or 'declaration of faith', that islamists mindlessly pollute the air with nonstop.

reason quarks are indivisible? How is the ‘charge’ of the electron and muons, or of the positron and any other counterpart of things, and of quarks all ‘elemental’ and interpreted as individual acts of creation rather than a common cause from some alike structure within all of them? Were the gods being playful when they created the three gemini family of the charged leptons and did they like the amber one best so that while they gave the power to partake more of the perfect form of heaviness to Mu and Tau they also cursed them to be unstable? Are we back to the magical creation of mythology in saying how those unique species received that innate power from the gods, rather than that they share most of their structure and diverge in some aspect? We can classify some particles more akin to some than to others; how is that an ‘universal elementary pre-set’ simply by random chance, and not a hint to the underlying structure and shared environment that gave both that property? How are they ‘unique’ and ‘indivisible’ when they differ by so very little and share different degrees of likeness to each ‘independently created element’?

Everything we can classify and liken to something else points to a shared origin; be it of common descent, that of a same structure built upon by further iteration, or that of convergence, by being moulded by a similar environment.

Is not the different of an electron and a positron just some one structure while the entire rest is the same? Is not that ‘structure of charge’ present in other ‘particles’ and in quarks? What little different is there between the quarks that sets them apart and so readily change one into the other? Is it some ‘weak force’ that god wrote some transmutation conditionals for them to be deleted and spawn a brand-new unique species with that single difference between them? When an electron is engulfed by a proton, is it despawned by the universe together with the entire sea of quarks and the structure of a neutron spawned in its place? Or is it that the electron is merely some exact structure which all parts are present there and so we too observe it being formed by those parts as the neutron expels one?

How could that ever be interpreted as some magical law that is hard-coded to despawn and respawn each corresponding thing, rather than a megastructure whose parts are reconstructed in accordance to that which is most stable on that environment? The very thing we observe on all other scales of nature and which so perfectly explains it, and indicates what we must seek to understand it deeper; how is it ignored for the sake of some imagined independent act of creation of unique species that simply exist at random from no cause even when they are so clearly correlated?

It is even hard to argue against such baseless belief when their only argument is their faith that there can exist no underlying cause since they have never seen those smaller things; trapped on the same endless immemorial battle where the microbiota is denied by those who argue that since they do not see anything with their naked eyes then nothing smaller exist – that trees grow at random and unpredictably, although some soils and conditions indeed are more fruitful so that it

certainly has to be the will of god permeating all things and through the laws of nature have individually created these different species of soils and he is the background force making it all work, since it is impossible those things have a physical cause when I looked with my naked eye and saw nothing.

Look back at Malthus and at what such an intelligent man was saying about seeds; blinded by his mystical indoctrinations. We know seeds do not need miracles to turn into each respective tree, but processes; we know caterpillars do not need a miracle to become a butterfly, but a process – why then does our modern science seek to explain all those ‘transformations’ with miraculous forces, which nothing explain, rather than prodding at the processes through which it occurs?⁹⁵

⁹⁵ “All these things being consider’d, it seems probable to me, that God in the Beginning form’d Matter in solid, maffy, hard, impenetrable, moveable Particles, of such Sizes and Figures, and with such other Properties, and in such Proportion to Space, as most conduced to the End for which he form’d them ; and that these primitive Particles being Solids, are incomparably harder than any porous Bodies compounded of them ; even so very hard, as never to wear or break in pieces ; no ordinary Power being able to divide what God himself made one in the first Creation.

...
Now by the help of these Principles, all material Things seem to have been composed of the hard and solid Particles above-mention’d, variously associated in the first Creation by the Counsel of an intelligent Agent. For it became him who created them to set them in order. And if he did so, it’s unphilosophical to seek for any other Origin of the World, or to pretend that it might arise out of a Chaos by the mere Laws of Nature ; though being once form’d, it may continue by those Laws for many Ages. For while Comets move in very excentrick Orbs in all manner of Positions, blind Fate could never make all the Planets move on and the same way in Orbs concentrick, some inconsiderable Irregularities excepted, which may have arisen from the mutual Actions of Comets and Planets upon one another, and which will be apt to increase, till this System wants a Reformation. Such a wonderful Uniformity in the Planetary System must be allowed the Effect of Choice. And so must the Uniformity of the Bodies of Animals, they having generally a right and a left side shaped alike, and on either side of their Bodies two Legs behind, and either two Arms, or two Legs, or two Wings before upon their Shoulders, and between their Shoulders a Neck running down into a Back-bone, and a Head upon it ; and in the Head two Ears, two Eyes, a Nose, a Mouth, and a Tongue, alike situated. Also the first Contrivance of those very artificial Parts of Animals, the Eyes, Ears, Brain, Muscles, Heart, Lungs, Midriff, Glands, Larynx, Hands, Wings, swimming Bladders, natural Spectacles, and other Organs of Sense and Motion ; and the Instinct of Brutes and Insects, can be the effect of nothing else than the Wisdom and Skill of a powerful ever-living Agent, who being in all Places, is more able by his Will to move the Bodies within his boundless uniform Sensorium, and thereby to form and reform the Parts of the Universe, than we are by our Will to move the Parts of our own Bodies. And yet we are not to consider the World as the Body of God, or the several Parts thereof, as the Parts of God, He is an uniform Being, void of Organs, Members or Parts, and they are his Creatures subordinate to him, and subservient to his Will ; and he is no more the Soul of them, than the Soul of Man is the Soul of the Species of Things carried through the Organs of Sense into the place of its Sensation, where it perceives them by means of its immediate Preference, without the Intervention of any third thing. The Organs of Sense are not for enabling the Soul to perceive the Species of Things in its Sensorium, but only for conveying them thither ; and God has no need of such Organs, he being every where present to the Things themselves. And since Space is divisible in infinitum, and Matter is not necessarily in all places, it may be also allow’d that God is able to create Particles of Matter of several Sizes and Figures, and in

It is appalling we are still on this argument today and that it has won over our said Sciences; that the complex things observed can be brushed off as guided by some incomprehensible magical law that performs that behaviour simply because that is how it was created for that sole reason with no 'natural cause' but intelligent design – and the harmful insidious thought of religious acceptance that we can just estimate from afar some probability since all those phenomena exist in the realm of the mysteries of god who hid from us so that we may never know how his designs work and the physical processes underlying it all.

It is all magic; it happens because 'the law says so' – and 'the math proves', or it comes close if we average it all out and ignore all these times it is grossly wrong since those are 'irrelevant statistical flukes inherent of that holy randomness and so those 'unlikely phenomena' are divine mysteries impossible for us mortals to ever explain'.

There is no advantage to enforce that our, so unstable and changing, equations are 'the ultimate limit of physics' and 'the discovery of the source code that god used to make the universe for us' rather than merely as the same clumsy approximations of thermodynamic simply generalizing the behaviour of that complex arbitrary object and 'force'; it is worse than meaningless since it is harmful to all our progress – for the engineering and all practical use there is no different if those are taken as 'real' or the mere mask of approximation, but for the science of uncovering the 'truth' of 'reality' only an exact description suffices and nothing could be worse than the admittance of such individual acts of creation intelligently designed by some unknowable deity.

Our unveiling of our origins and the accumulation of successive steps into building ever greater complexity shows us that indeed the Atomists were right; for now it is undeniable to us the very process by which the admittance of a single simple 'thing', and the admittance of 'motion', could in sufficient numbers build any complex configuration seen today in every 'particle' or 'force'.

Our current ignorance, it pains me to even have to state such a thing, has no effect on the reality of such processes; well before our brains or mammals and animals were formed, before 'understanding' existed, the moon was already there regardless of the little logical processes that would eventually arise in brain of apes, or any 'measuring device' to 'collapse the wave' – that is

several Proportions to Space, and perhaps of different Denfities and Forces, and thereby to vary the Laws of Nature, and make Worlds of several forts in several Parts of the Univerfe. At leaft, I fee nothing of Contradiction in all this.”
 – Opticks III, where raves on stupidly the grand Newton at the conclusion; every 'unique species' is an individual act of creation to which the wisdom of the creator is to be praised and so too every phenomena is the product of unique laws of nature and unique kinds of matter individually created for that purpose by their intelligent designer, and although we have gotten rid from the former make-believe biology the later is still the very core of our modern so-called 'science'.

the entire base of science that allows us to tell what happened in the past, because nothing is 'random' but the result of exact causes whose very product eloquently declares its existence.

Modern 'science' lives in the vain hopes of succour that 'if only I discover this new particle' or 'if only I discover this new law' then they may be able to salvage their failing patchwork of theories and make everything prim and proper again on the resemblance of what it once was with the Newtonian elegance before they had the precision to know better; but of course the chances of that happening are identical to the chances of we uncovering the blueprints that Prometheus and Epimetheus used to design each different animal species - should we pin the hopes of our progress in Biology, and Medicine and all other related fields, on that and pray we stumble upon that treasure that will instantly explain our every question about living beings?

The verdict is the same in Physics where we still pursue that mindless delusion of 'laws' and species of 'elements' rather than the meticulous work of dissecting every body and describing the formation and workings of all its parts.

The Dark Age of Natural Philosophy

I – Showdown Time

On the left, or wrong, corner of the ring we have the gargantuan unit of our modern sciences; that which produced all of our erewhile unimaginable world of technology – raised, coached and still possessed by the spirit of mystical cultists, ‘the greatest geniuses of humankind’, such as Newton, Einstein and Feynman.

On the right corner we have me; a twenty five years old Brazilian who quit high school and who with unbearable rage at such creationist nonsense on every educative course and programme online was induced, by necessity, to write this treaty – on June of two thousand twenty three.⁹⁶

The sheer mindlessness of the doctrines so long embed into them makes me doubt that even if I could get them to read it that it would receive any attention besides the usual neglect they have as they laugh at all logic and ‘determinism’; since identical to the religious foolishness they came from they just laugh having pleasure in declaring themselves ‘above all common sense and different from everything else in the world’ on the holy pedestal of being higher than reason as the heaven is from earth – wholly unjustifiable repeating Dalton’s assertion of the indivisible because ‘it looks like that to me’ and seeing all questioning of their mindless assumptions as pure heresy.

⁹⁶ “T’ay eſt énorri aux lettres de mon enfance, & pource qu’on me perſuadoit que par leur moyen on pouuoit acquerir vne connoiſſance claire & aſſurée de tout ce qui eſt vile a la vie, i’auois vn extreme deſir de les apprendre. Mais ſi-toſt que i’eus acheué tout ce cours d’eſtudes, au bout du quel on a couſtume d’eſter receu au rang des doctes, ie changay entierement d’opinion. Car e me trouuois embaraffé de tant de doutes & d’erreurs, qu’il me ſembloit n’auoir fait autre profit em taſchant de m’inſtruire ſinon que i’auois découuert de plus en plus mon ignorance.”

– Discours de la Methode I, which tiny biography I can well relate to as upon writing magical fantasy, in Kaiho, I suffered the difficulties of a flawed universe where it was impossible to harmonize the descriptions of the ‘energies’ and ‘powers’ within the world so that I was forced to seek help in studying the scientific disciplines since having produced our wonderful modern technology it certainly would tell me exactly how the world works and having started on the pure mathematics which govern it I had good hopes of what were to come next, but upon finishing with the entirety of our modern disciplines I was disappointed and even more confused than before; pure irrational mysticism, with its ‘laws’ and ‘elements’, no different from the incoherent babble of the fanciful modern ‘moral philosophy’ and little better than the religious acephaly I abandoned on my youth. To which, then, I endeavoured to produce an answer I would be satisfied with; and which now I disclose to the world in this treaty.

But here we go; very likely the moment you all have been waiting for since the first paragraph – let us see how the consensus of our modern Physics, that is Quantum with its Standard Model and Relativity, fare on our evaluation and against my theory of Logical Succession.

It would follow beautifully to ‘ring the Bell’s inequality’ now, but for the sake of argument that must come later.

Let us now analyse our modern Quantum Mechanics and its Standard Model under the same criteria we have exposed all other theories; or at least more in-depth, since I just gave a preview of the entire argument on the end of the previous chapter.

In general it explains every phenomena based on ‘four forces’ and an ever-growing list of ‘elementary particles’ which being as magical as the ‘forces’ they simply ‘are’ as a defined pre-set of some intelligent design; having no parts they just come into being, and disappear, and their many complex properties are randomize by that creator deity playing dice.

Their argument for that is the same as Dalton; they are atoms because they are discreet beyond any different that he can make out – sometimes some are shown to have parts, but they just say ‘that next one then is indivisible’ and go on repeating the same mistake with absolute no justification for such recipe shown throughout history to be so worthless and not-good of theory as it provides some convenient ‘answer’ rather than ‘understanding’.

The ‘law of inheritance’ is sometimes so called, or a myriad of others we may take as an example, and sadly repeated blindly my most as some actual inviolable ‘guiding force of nature’ when the non-mystical truth is that a sequence of chemical reactions, each independently following what its environment favours to react, ends up creating that sense of order and ‘law’; identical to as ‘heat’ and its ‘thermodynamic laws’, as we have long treated here, are meaningless to the reality of the process which far from any guiding force of their behaviour is the product of individual molecules following ‘the path of less resistance’, that which the pressures of the environment shapes for it – and so too so strongly marked is the idea of ‘laws of physics’ on people they think that as some magical guiding principle that forces everything to follow that behaviour simply by some intelligent design, but identically to before there is no ‘guiding principle’ or ‘law’ as it can be nothing more than independently moving particles each following its own path of less resistance and giving the illusion of ‘order’ and ‘law’ merely by forming structures due to the alike pressures presented to them.

There is only ‘uncertainty’ through the blind ignorance of trying to ‘measure’ by following fantastical ‘laws’ instead of summing all underlying process that produce those characteristics.

The perfectly Platonic form of ‘heat’ that magically performed that behaviour by design was by no means any explanation, regardless of indeed having some use in using that doctrine to predict and

construct with, just as the ‘elastic fluid’ of Dalton was a more physical invention that would operate by the same magical rules of that ‘heat’ form; and as both fail to describe the phenomena of ‘heat’ so to admitting some perfectly Platonic form of ‘magnetism’ or any other force performing that behaviour by design is absolutely no explanation to the phenomena before us – just as the modern ‘elastic fluid’ of Dalton, the ‘force carriers’, merely as some physical counterpart that magically performs that inherent design is pure fantasy far from any description of reality.

The modern doctrines exactly mirror those of their predecessors; the life battle of Robert to extinguish the idea of ‘species’ show how ingrained it was throughout all of biology as the great curse holding back the entire field of millennia – just as today the ‘laws’ and their ‘atoms’ or ‘elementary particles’ coming straight from the Platonic dimension of perfect forms as independently created pre-programmed species is the greatest bane of Physics.

Besides all those they also make a myriad of other assumptions, but much less explicitly; as that ‘space’ and ‘motion’ simply ‘are’ requiring no further description than blind acceptance – and even ‘numbers’ too simply exist as perfect forms shared inherently between all things.

All those forces produce ‘motion’, but what is that? They do not condescend do even explicitly admit such inherent characteristic, but just assume the basic concept of it with no explanation or reasoning; or even explain how such unique elementary particles are discreet if they can be changed so much that they can be found in a basically continuous spectrum of velocities and ‘energies’ – how is something composed of no parts able to be differentiate as faster or slower, how can it gain and lose energy while still being a single indivisible ‘elementary particle’ composed of no parts?

Admitting ignorance is undeniably better, but let us dive in on specific phenomena to see if from our general logic we can bring about a more agreeable description of what is happening on all this massive factual data of collected ‘unique’ behaviours.

It is clear that it is ‘no good’, but we will use the very data they catalogued, for indeed rather than any coherent theory the Standard Model and Quantum are merely a catalogue of every phenomenon with several camps of interpretations⁹⁷, to show that they are also superfluous in admitting an unique magic species that deus-ex-machina an ‘explanation’ for each phenomenon.

“Etiam opera, quae jam inventa sunt, casui debentur et experientiae, magis quam scientiis: scientiae enim, quas nunc habemus, nihil aliud sunt quam quaedam concinnationes rerum antea inventarum; non modi inveniendi, aut designationes novorum operum.”

– Novum Organum Unus VIII, where he criticizes that the ‘sciences’ of his time is just a list of random

The assertion of ‘it is random’ has never been a serious, valid or useful answer and on the moment that such is admitted instead of logical cognisable causes then the human mind no longer has any incentive to inquiry; and instead it has to be fixed in inactive torpor or distract itself by amusing itself only with bewildering dreams and extravagant fancies – for ‘cause and effect’ is the entire foundation of all human knowledge.⁹⁸

Such is the same ridiculous assertion just as often repeated by conspiracist on their explanation since ‘randomness’ differs in nothing from ‘it is the action of god’ or ‘it was aliens who did that’; things that have been professed since forever to shamefully try to justify their ignorance and promote their beliefs since it is a convenient excuse that both ‘explains everything’ as it is impossible to ‘prove that such thing does not exist’, but as always they will be replaced by a real explanation when we acquire some more knowledge about the phenomena before taken as ‘unexplainable’.⁹⁹

experiments and not any definitive system able to infer and predict to path to new more fundamental things;

where on XI and XII he repeats that critic expanding it:

“Sicut scientiae, quae nunc habentur, inutiles sunt ad inventionem operum; ita et logica, quae nunc habetur, inutilis est ad inventionem scientiarum.

Logica, quae in usu est, ad errores (qui in notionibus vulgaribus fundantur) stabiliendos et figendos valet, potius quam ad inquisitionem veritatis; ut magis damnosa sit, quam utilis.”.

“The human mind will no longer have any incitements to inquiry, but must remain fixed in inactive torpor, or amuse itself only in bewildering dreams, and extravagant fancies.

The constancy of the laws of nature, and of effects and causes, is the foundation of all human knowledge.”

– An Essay on the Principle of Population.

Now, no one really defends that this model is complete and flawless as it directly lacks gravity, but it is seen like that on context that the errors are too small to weed out without extremely high energies over a dozen orders of magnitude from anything feasible today, like the realm of fields as ‘strings’ – and so with those new constant to add to the list and laws, ‘new symmetries’, the ‘final theory’ will be found.

My argument is not that it is merely flawed, but that this methodology behind it is and will never produce otherwise; and so will be eternally flawed the route they seek as they dream of ‘discovering the final laws from god’ rather than doing any actual science in describing the exact mechanisms of the world by whose long sequence of causes and effects all things are constructed.

⁹⁹ “Omnia determinatas habeant in Natura causas, ex quibus profluunt, & idcirco a nobis fortuita dicantur quaedam, quia causas, a quibus eorum existentia determinatur, ignoramus.”

– Philosophiæ Naturalis Theoria 540, where it says ‘all things have determinate cause in nature so that it is purely by ignorance we claim something to be random’; which beautiful and correct sentiment I argument here on the firmer ground of ‘necessity’ rather than feelings.

Truly I cannot say that such particles are not individually created units and motion is just some metaphysical spirit possessing them; it would be unjustifiable to affirm that with no proof – yet infinitely more unjustifiable is their assertion that they have discovered the ‘building blocks’ specially created by the hand of some universal deity when all our experience even with such atomic species have shown otherwise, when the very science deals with exactness and knowledge rather than mystic unknowables and when utility itself is thrown away for the sake of some baseless belief.

We cannot assert ‘reality is not so’, but we can with all certainty assert ‘that theory is unjustifiable’ as we are simply forced to reject such incoherent non-sequitur proposed upon the phenomena; this flaw has been for so long as ever maintained its sacrosanctity through the despotic sway that Aristotles and Newton have up to this day held over Science – but no further if this open revolt of mine come to fruition leading to the tyrannicide which begets our true scientific revolution.

I leave now the generalized character of the theory and how it proceeds merely as that which we are forced to admit, as both sufficient and ‘more good’ than any other, to deal with the less abstract specific descriptions we elicit from it; in contrast to our modern ‘explanations’, which could very well all be summed with their best ‘argument’ that ‘that is just how the universe is; everything is some perfect form and individual species that is just created and destroyed by the universe at random with clearly no relation to that other one was created or destroyed on the same process because they are all unique and unchangeable although they all share several characteristics and interactions but that is just coincidence from the universe programming’.

So let us see from which causes proceed these things that make us wonder, and purge the fog that clouds our mind¹⁰⁰; to which if you do agree with my argumentation of what is a ‘good’ theory and that the parsimony to admit the minimum necessary is the way to it then what follows should provide an insight that truly scrapes that which is most fundamental in our universe – and the

¹⁰⁰“L’acqua”, diss’io, “e ’l suon de la foresta
impugnan dentro a me novella fede
di cosa ch’io udi’ contraria a questa”.

Ond’ella: “Io dicerò come procede
per sua cagion ciò ch’ammirar ti face,
e purgherò la nebbia che ti fiede.”
– Purgatorio XXVIII: 85-90.

direct syllogism of it is proved to us so acutely that every other demonstration seems obtuse in comparison¹⁰¹.

¹⁰¹ “onde ti venne?». E io: «La larga ploia
de lo Spirito Santo, ch'è diffusa
in su le vecchie e 'n su le nuove cuoia,

è silogismo che la m'ha conchiusa
acutamente sì, che 'nverso d'ella
ogne dimostrazion mi pare ottusa».”
- Paradiso XXIV: 91-96.

II – Less Philosophy; More Physics

We sip of our cup of cappuccino as we deliberate about what we can tell of the mechanical action that produces all things. We still burn our tongue a little, but since we have no infra-red vision that sense of touch is currently our only means to approximate its temperature; the best we can estimate otherwise by pure analysis is that the fire we could see glowing so we knew it was over five hundred kelvin and so too we know our non-glowing cappuccino is below that – or as the dihydrogen ‘bonds’ are not breaking apart into vapour we know their motion to be not so violent and thus below the boiling point of water.

But the infra-red vision would be a much safer and better way to truly grasp the average speed of those molecules; for we experimented much and are quite familiar with the mechanisms that forms photons – far from random or some ‘unique species’ we know it a product is exactly proportional to how hot something is, that is, to exactly how fast something changes speed.

Something simply going fast does not shine so we can easily tell that it is not their speed itself, but the collision amid them and their change of velocity that produces the effect; we are also familiar that the photon is not ‘generated’ for free – it is both bound to the magnitude of the velocities as well as it ‘costs’ exactly that amount of ‘motion’ to produce it.

That is, the hot object even in vacuum without being able to touch anything would still cool down by emitting photons so that the ‘heat energy’, their motion, is consumed to produce that other body; and that is even an amount of energy exactly proportional to the speed of the collision – the collision of some two-particles system is not ‘perfectly elastic’, but rather leaves that system with a total motion smaller than what they had before, and that ‘motion’ that was lost formed a photonic structure with proportional amount of ‘energy’ itself.

Our cappuccino produces infrared due to the current velocity of its collisions; if the molecules were faster they would lose even more energy on those collision and that higher ‘waste’ would likewise collapse down to more energetic photons being emitted – as the very range of velocities throughout a material produces many wavelengths exactly due to the non-uniformity as they deviate from the standard mean of the system.¹⁰²

¹⁰² I use ‘faster’ and ‘velocity’ since I am dealing with the single material and molecules in question, but the ‘thermal radiation’, the production of photonic megastructures from the lost fragments of their impacts, is dependant solely on the ‘energy content’ of the motion, ‘kinetic energy’, and not their ‘speed’; and it would be very weird if it depend on the ‘velocity’ as some structural perk linked to that shape formed at that speed – but instead ‘temperature’ is measured by the ‘kinetic energy’ and iron, being heavier than anything below, has a lower velocity than some lighter element while both are at the same ‘temperature’. So that the production of the photon is exactly proportional to the magnitude of that energy transfer as it changes speed; which wastes

We also know that all that ‘motion’ that is now on the molecules of the cappuccino and forming photons came itself from the reaction of the hydrocarbon with oxygen; we have seen that our modern day Physics uses the magic word ‘bond’ to represent it merely as an analogy and does not provide any description of what is happening or where is ‘the energy’ stored and released from, they also do not deign to give any attempt of a description at motion and as for ‘photons’ they say that ‘it is an elementary particle’ that appears as a perfect Platonic form from some universal pre-set with random characteristics – we can only be utterly appalled by such neglect and unphilosophical mindlessness, and that their claim cannot hold as an acceptable description since they cannot possibly justify that ‘unique element of photonic essence’ when so clearly we can reduce that ‘motion’, ‘bonds’ and ‘photons’ all share a common building block and are the different disposition selected from a same common ancestor.

Or how could a photon be such ‘unique fixed species’ from some indivisible ‘photonic essence’ pre-set when we can clearly see it change to different constituting parts; how is it indivisible when two can join to form a more energetic one or be divided into two to produce two structures of smaller energy? It is impossible to comprehend how something that we can divide so much that we still do not know what is the minimum amount of energy is or what is its smallest part can be called ‘indivisible elementary particle’.

Likewise we can see the absolute equivalence when the process runs the other way around; when a photon hits some molecule and is at least partially consumed its parts merely rearrange again as the imparted ‘motion’ of that molecule – which then indeed is necessary and ‘consumed’, reorganized, on any endothermic reaction that forms ‘bonds’ that ‘store energy’.

That equivalence does not hint at some hard-coded magical transmutation between unique species, but at a same common factor differently disposed by selection to form all such structures.¹⁰³

Indeed we cannot help but admit the so bizarre phenomena of the pieces of the sun raining upon us so that they hit the pressure sensors of our eyes and we call it ‘vision’; how they unelastically bounce off everything as the beige of the curtains, the green of the walls and the difference of

more ‘motion particles’ not taken by any of the two bodies and thus the greater cloud of wasted motion collapses into more massive photons – quite a simple example of stoichiometry rather than mystical ‘energy conservation’ law and magical ‘energy conversion’ into ‘different elementary species’.

¹⁰³ “Jam vero illa, quæ vulgo elementa appellari solent,
Terra, Aqua, Aer, Ignis, nihil aliud mihi sunt,
nisi diversa solida, & fluida,
ex iisdem homogeneis punctis composita diversimode dispositis.”
– Philosophiæ Naturalis Theoria 450.

every detail of our faces so that by such variation of pressure on the ocular receptors we discern the tridimensional space around us by means of the colours made-up on our minds – and as we feel the ‘heat’, that transfer of ‘energy’, are we not also forced to feel on our minds that the gravity of the great luminous star is ever weaker as it incessantly diminishes its own mass by reorganizing itself to the structure of photons emitting thus its entrails to the void of sidereal space?¹⁰⁴

Dalton assertion that the sun emitted ‘rays of heat’ to increase his ‘caloric gas’ because ‘it could not be the same as the ray of light’ can sound very ridiculous today, but the very same assertion is today held that ‘rays of light’ are that separate and unique ‘elementary species’ rather than the clear physical structure present before us; just as the movement of small particles is the ‘heat energy’ so to that ‘radiation pressure’ can be conceived to be nothing but the very identical

¹⁰⁴ That is, each ray of light merely exerts different mechanical pressure and any other impact will trigger that same release of a chemical gradient on the nerves causing the brain to conjure up colours.

“Or il faut penfer en mefme façon, qu’il y a des cors qui eftant rencontrés par les rayons de la lumiere les amortiffent, & leur oftent toute leur force, a fçavoir ceux qu’on nôme noirs, les quels n’ont point d’autre couleur que les tenebres. Et qu’il y en a d’autres qui les font reflefchir, le vns au mefme ordre qu’ils les reçoivent ; a fçavoir ceux qui ayant leur fuperficie toute polie peuvent feruir de miroirs tant plats que courbés, & les autres confufement vers plusieurs coftés. Et que derechef entre ceux cy les vns font reflefchir ces rayons fans apporter aucun autre changemēt en leur action; a fçavoir ceux qu’on nomme blancs : & les autres y apportent auec cela vn chagement femblable a celui que reçoit le mouuement d’une balle quand la frize ; a fçavoir ceux qui font rouges, ou iaunes, ou bleus, ou de quelq autre telle couleur.”

– La Dioptrique I, where René describes how bodies amortise, weaken, the force of that bullet called a ray of light, and thus they are made black; and when they reflect it as received then it is white, and different degrees of force left on the bullet produce reds, yellows, blues and any other colour.

“Qu. 8. Do not all fix’d Bodies, when heated beyond a certain degree, emit Light and fhine ; and is not this Emiffion perform’d by the vibrating motions of their Parts?”

Qu. 10. Is not Flame a Vapour, Fume or Exhalation heated red hot, that is, fo hot as to fhine?

Qu. 13. Do not feveral forts of Rays make Vibrations of feveral bigneſſes, which according to their bigneſſes excite Senfations of feveral Colours, much after the manner that Vibrations of the Air, according to their feveral bigneſſes excite Senfations of feveral Sounds? And are not [...] the feveral intermediate forts of Rays, Vibrations of feveral bigneſſes to make Senfations of the feveral intermediate Colours?

Qu. 30. Are not the grofs Bodies and Light convertible into one another, and may not Bodies receive much of their Activity from the Particles of Light which enter their compoſition? For all fix’d Bodies being heated emit Light fo long as they continue fufficiently hot, and Light mutually ſtops in Bodies as often as its Rays ſtrike upon their Parts, and we ſhew’d above.

[...] The changing of Bodies into Light, and Light into Bodies, is very conformable to the Courſe of Nature, which ſeems delighted with Tranſmutations.”

– Opticks III, where Ifaac poses up dozens of questions before the conclusion; but the omnipresent crippling crutch of intelligent design hindered him from understanding the mechanism of the world and left him in his wilful blindness of magical transmutations of unique species by the unknowable means of divine will instead.

phenomenon on a smaller scale on which we insist on making the same mistakes of our inventive forefathers and their needless and unjustifiable division of nature into magic energies.

Indeed the ‘energy-mass equivalence’ equation is about the most famous equation in Physics; so it is rather astonishing how by most no thought is given to the interpretation of it and those who do somehow postulate that a transmutation and spontaneous generation happens at the interaction of those unique elementary species rather than the clearly show of common descent – such a beautiful, clear and succinct derivation to then conclude at what can only be called an atrocious mental incongruence that ‘the emission and absorption of radiation transfer inertia’¹⁰⁵.

That is certainly due to the tradition of creating ‘laws’ and ‘species’, but perhaps in particular to one of the most cryptic, and stupid, declarations of Ifaac; today rendered as ‘for every action there is an equal and opposite reaction’¹⁰⁶.

What it is supposed to mean is rather intuitive; ‘if I shove something, I also am moved back’. But considering the small particles on the hot cappuccino; considering one which is mostly still and is hit by a fast moving particle – now both of them are moving at different speeds, one more than before the other less than before, but could there possibly be any sense in explaining that as ‘an equal an opposite reaction’? When the faster made contact did it ‘create a reaction’ that created energy to the one ahead and then ‘suffered an opposite reaction’ that erased energy from itself? What about the inelastic ‘waste’ of that process; where is the ‘equal and opposite’ reaction to the photon produced?

¹⁰⁵ “Wenn die Theorie den Tatsachen entspricht, so überträgt die Strahlung Trägheit zwischen den emittierenden und absorbierenden Körpern.

– Ist die Trägheit eines Körpers von seinem Energieinhalt abhängig?, ‘Does the Inertia of a Body depends of its Energy content?’, rather than concluding that the imaginary spirit-parameter of energy is pure foolishness and an arbitrary division since that ‘energy’ itself is some number of particles which requires proportional addition of said energy-particles to deform the structure into motion, ‘inertia’ not as a ‘magical vis insita’, ‘energy within’, but the mere stoichiometry of its composing parts; as I shall deal with just ahead.

Albert Einstein, sixty eight years ago. He adopted the equations of the luminiferous aether as some relative space and time which bends ‘at high speeds or under gravity’; with many other contributions that lead the Physics community back to the drawing board of every concept in order to conform it to his wild guesses – defining thus this revolution of Physics on the last century, but which accomplishments and contributions to Science I will discuss properly at length next.

¹⁰⁶ 4^a Lex. III.

Actioni contrariam semper & æqualem esse reactionem: sive corporum duorum actiones in se mutuo semper esse æquales & in partes contrarias dirigi.”

– Philosophiæ Naturalis Principia Mathematica: Axiomata Sive Leges Motus, or ‘the third law of motion’.

When the photons are colliding with our eyes to see the cappuccino or read this; where is the equal and opposite reaction happening? When a solar sail is impelled forth by photons produced by the sun, is the sun suffering an 'equal and opposite reaction'? Or when a body suffers a gravity assist and is accelerated on its course; how could 'equal and opposite' ever be a description of anything? The system indeed about 'remains with the same total energy', but not by creation and opposite destruction; the planet that assisted that ship lost energy and the ship gained – the slow molecule gained energy as the other lost.

It was an unidirectional transfer.

This all can be modelled by the 'equal and opposite reaction', but it is about the worse possible way to describe what is happened; all we see is a transfer – 'when a body pushes another it cannot donate any movement that it does not at the same time loses it itself, not be taken any from it without increasing the same amount in the other'¹⁰⁷.

I cannot conceive of any dispute that would favour some magic 'equal and opposite reaction' rather than the mere direct transfer of some 'energy' from body to body; not on the 'principles of conservation of energy' as needlessly made-up to account for all that magically of 'opposite reactions', but on the mere stoichiometric necessity that by transferring a piece of itself, energy, that object now has less energy than before while the receiver has that piece more – in every case, as in the production of a photon from the reduction of motion in a Bremsstrahlung, the pieces that composed one thing have been rearranged as additional parts on some other object or have collapsed as an entirely new structure selected by the pressures of the environment around it.¹⁰⁸

¹⁰⁷ "Quâd un corps en pouffe un autre,
il ne luy peut donner aucun mouvement,
qu'il n'en perde en mefme temps autant du fien,
ni luy en ôter que le fien ne s'augmente d'autant."
– Traité du Monde et de la Lumière.

¹⁰⁸ "Wenn jedes Energiequant des erregenden Lichtes unabhängig von allen übrigen seine Energie an Elektronen abgibt, so wird die Geschwindigkeitsverteilung der Elektronen, d. h. die Qualität der erzeugten Kathodenstrahläng von der Intensität des erregenden Lichtes unabhängig sein; andererits wird die Anzahl der den Körper verlassenden Elektronen der Intensität des erregenden Lichtes unter sonst gleichen Umständen proportional sein."

– Über einen die Erzeugung und Verwandlung des Lichtes betreffenden heuristischen Gesichtspunkt, On a heuristic Point of View about the Creation and Transformation of Light, where in contrast to the more continuous electron braking Albert has his more brilliant insight as he describes the particles of light. Thus in complement to my description of photons forming from the lost fragments of motion we have too the very quantized structure they form; if you are reading this in an electronic device it is likely using semi-conductors which structural gap of the doped lattice throw electrons into the desired structural placement so that it will emit the desired intensity of light as it falls down into the more stable place – and likewise light can

only change the 'electron shell' in exact proportion to what the structure of the atom selects for, all smaller amounts will not meet the activation energy and fail to disturb the structure enough while all greater amounts will either destroy the hold of the structure ionizing it altogether or disturb sufficiently into another stable layer, but which there being the gap left behind on the more stable form it will eventually be selected there as it emit those exact 'quantized' pieces of the structures which will reorganize as a photon of that exact 'energy'.

The 'exclusion of states' found in fermions bound to some structure, as the 'atomic' one, strongly hints to such structural sites where only that exact form can bind to, the eyes of storms where they are pushed to within the subatomic sea; the structural difference called 'spin' can only fit on that part of the greater structure and simply once occupied there is no more sites for an equal one to 'bind', fit, on that structural layer - sites which have to be formed and affect the stability of the entire structure, as so beautifully we observe molecular oxygen singlets after the slightest perturbation emitting those parts of itself that collapse into photons of red light when reorganizing its structure to the lighter and more stable form of a triplet with two sides with one electron each rather than the asymmetrical construct of two on one site of the 'pi antibonding' complex and none in the other. The same structural limitation is found without the 'shell structure', as when the protons have the same spin in an orthohydrogen molecule, no longer by the magical 'exclusion of states' rule, but as a clear show of some structural property that is less massive and more stable with two complementary parts rather than two equal ones; but 'more stable' means merely that which is 'most fit' at those environmental pressures so that we do see the more massive orthohydrogen dominate at higher temperatures as the optimal structure while the less massive parahydrogen is only selected for in an environment where the structure has to rely less on outside processes to maintain its shape, as at lower temperatures - just like a phase transition where the pressures selected the molecules to build different structures or if we go even bigger we arrive back at Natural Selection of how those bigger structures made of molecules are likewise selected by the environment to an infinity of shapes optimal to each 'combination of pressures' or 'niches'.

With no mystical additions of forces or laws I derive them all from the same basic assumptions so that it is all the same exact process and instead of a comprehensive list of all phenomena, as if any were 'unique' in any way, you can refer back to my methodology in order to answer all particular questions which I do not explicitly describe here; the 'difference' of the two formation of the photonic structure there is in the quirks of some megastructure or subatomic sea which we know virtually nothing about - and giving that behaviour as a magic property of the electron is the same as trying to describe clouds by giving them intrinsic properties rather than seeking to understand the immense complexity of the atmosphere that selects all their shapes and behaviours.

That unreality of very questionable utility, giving 'natural tendencies' to clouds as some unique elementary thing while ignoring the atmosphere, is the complete and perfect description of Quantum Mechanics; wild meaningless 'statistics' of how the cloud will behave trying to describe the workings of the atmosphere as random magical properties of the cloud and of some guiding hand of 'forces' - this entire treaty, instead of any silly 'hidden variable within the cloud' that would make the cloud make any sense to our 'preconceived classical views', is how I propose the existence of that atmosphere which is yet mostly unseen to us, but which powers to move things on its winds are so clearly evident on every observed phenomena.

My description is indeed of an orbiting electron as a superstructure revolving around the atomic nucleus, and it is kept on each 'shell' by the flow of the yet unseen sea of particles rather than 'the atom is 99.99999 empty space' and it is a 'cloud of probability' that waves around teleporting when 'observed', and like all else I say that is part of its structural properties; the idea that 'accelerating charges radiate energy' is based on the foolish idea of 'forces', as that magical 'magnetism', as well as some general claim after testing some macro phenomenon - there is simply no explanation of the mechanism behind such radiation and the megastructure known as the electron clearly is not emitting energy outside, or if it is the atom is absorbing and giving it back, when it is accelerated while bound to the atomic structure, always with a position and momentum and not only because it is always interacting, 'being observed and collapsing the wave', with the nucleus. The clear and logical conclusion is that the classical claims are completely unfounded and unnecessary; not the invention of

And by adopting such mechanical and clearer description we can much better understanding the process involved; when two hydrogens and an oxygen ‘bond’ and ‘releases energy’, ‘heat’, it merely becomes faster – it was the very pieces composing their original structure which now are differently disposed on that single greater structure which, at that speed, is equivalent in energy to the originals, but which as it ‘cools down’ by transferring that energy in collisions it is less massive than the lone hydrogens and oxygens.

Or the very exact same process when an atom decay or is forced into other forms; the two ‘lighter atoms’ are only lighter once they ‘cool down’ to that previous state of motion – the moment they are formed, full of ‘energy of motion’, they are certainly as massive as the original, but lose that mass by transferring as ‘heat’ imparting motion all around it.

The notion that ‘hot things are more massive’, coming from the ‘energy-mass equivalence’, is well accepted; yet far from eliciting any of this necessary mechanism they neglect as some mystic transmutation between forms converting between some worthless universal ballast called ‘mass’ and some spiritual power, just like ‘heat’ was before, that can just possess and inhabit the same space as that ballast or individually in structures different from mass – one ‘ceasing to exist’ to be consumed by the universe to pay the sacrificial price of some ‘equivalent spiritual energy’ which is then used to buy some other particles of equivalent price.

Where did that ‘elementary particle’ go? That unique and individual ‘photonic essence’ that separates it from everything else in existence as homogeneous and indivisible?¹⁰⁹ Was it

absurd new creationist ideas of even more magical species and laws that completely avoid dealing with the mechanism.

On the absolute claim that more intensive of a lower wavelength not having a difference we too know that is not the case, just mostly; the difference is simply extremely lower than the change to a higher wavelength, but it does indeed release a little more electrons from a material than a low intensity one – both because they can ‘interfere’ as two weaker photons collide to make a more massive one able to one-punch the energy gap, just as if successive perturbations happen in a short enough time frame, since nothing is instantaneous, they will too disturb the structure enough. The ‘phenomenon of tunneling’ is no special trick of magic, but another example of that same thing; of merely ‘not having enough energy to one-punch the activation’ so that a single impact cannot cause the change, but where if the disturbance of the structure is performed in quick enough succession it can be sufficiently disturbed to trigger its reorganization to another more stable form by that combined effort rather than the most familiar extreme disturbance of a single giant impact trigger.

¹⁰⁹ The ‘elementary particles’, supposed to have no constituent parts nor origin, simply appear from nowhere with random characteristics; they are ‘spontaneously generated’, but I have no space to include that critic as an adject everywhere, so just imagine that too every time I use the word ‘species’.

Those ‘newly spontaneous generated unique species’ are taken to be related to the others and the previous event by magic rather than common descent; since any logic and system of cause and effect would destroy the requirement of randomness that their indoctrination preaches as absolute – and instead of ‘transforming’ one spontaneous ceases to exist and the other by luck of fate spontaneously come into existence with equivalent energy, no heresy of supposing any relation and cause is allowed.

transmuted into another ‘element’, as when two photons collide to make the ‘unique species’ of the ‘indivisible’ electron, purposefully by some intelligent law of god? When that ‘relativistic mass’ become ‘actual mass’ and magically develops inherent characteristics as ‘gravity’ or when ‘mass’ is broken apart and becomes only ‘relativistic’, is that some hidden-code on the back of the universe that our designer wrote as a ‘law’? When ‘mass’ was ‘split into energy’ what happened to that ‘absolute heaviness’ inherent in it? Did it, like Dalton postulated, created a new indivisible species which hard-coded capacity for that energy was different so that now it partakes less of the absolute heaviness by interacting less with the perfect Platonic form of ‘weight’ now called the Higgs field and its boson? Is that the work of god detailing how each pion should roll their dice, and not a result of their structure that they possessing charge often break apart in such a way they are reorganized into massive muons while the less directional cloud of the collapse of neutral ones form ‘massless’ photons? Is not the helicity of that photon and spin of ‘massive’ particles just like the handedness of crystals, a product of that environment whose conditions selected for that structure, which shape produces all its characteristics, rather than any other?

Science itself starts with the supposition that denies those magical causes; and it begins the scientific processes by looking into the mechanisms to explain it instead – how then have we gone down back to the same worthless magical explanations of purposefully build ‘laws’ abandoning all the rationality science and knowledge?

Rather we see that it was never some designed universal pre-set and unique created species from some equivalent sacrificial price of metaphysical ‘energy’, but came merely from the reorganization of a same component faced with different environmental selective pressures; and it was never distinct, but composed of the very same parts found on every moving thing, every ‘piece of matter’ and every ‘force’.

This relatedness only points to some more fundamental thing which subject to its environment formed, and continuously forms before our eyes, all these different structures we observe; a line of common descent that links them all to a common shared cause – and not individual separate acts of creation.

There is no perfect Platonic form from which the universe randomly summons its ‘elementary particles’; there is no ‘wave of probability’ to the characteristics that structure will take – we clearly see that it is merely our ignorance and crude tools that hinder us from accounting all processes that by selection were shaped as some exact product of previous conditions.

It was simply ‘their time’ to die or be born, to decay or to appear; be it from those atomic processes on the supposed void of space where things just pop in and out of existence – no explanation needed or even possible because everything happens beyond the knowable realm just as god decreed their time to come and go.

The same process can be repeated to all other elementary particles; which might there be some new additions made from the time I wrote this to when you are reading it – some of the currents then being demoted from the holy pinnacle of ‘species’ and its parts then for no reason enshrined on that pedestal of immutability. Thus I will pass the tautology of repeating that same argument about the equivalence of every particles; and that rather than magical transmutation into ‘unique elements’ they all simply are composed of the same building block.¹¹⁰

¹¹⁰ The atomic radiation is where they most love to use the phrase ‘spontaneous generation’ and ‘spontaneous decay’ and so on; and much worse than the ‘spontaneous generation’ of animals from mud, where it at least came from somewhere, they use it to mean it came from absolutely nothingness as a universal pre-set, regardless of the atom losing energy and now lacking the analogous to that exact part it expelled – when no rational thought ever use the word ‘spontaneous’, but seeks to describe what sequence of processes led to that product we observe.

Most people ‘know’ radioactivity only has ‘some invisible evil thing that comes out of bombs gives you cancer’ so let me provide a quick sketch explaining what is ‘radioactivity’; since this is meant for the general reader, albeit I go in deep on the esoteric modern physics in this last section.

Radioactivity is the phenomenon of an atom ‘radiating’; which means it is expelling a ‘ray’ – which is just any projectile at some arbitrary ‘high’ velocity. The three most common ones are the emission of two protons with two neutrons, the emission of mainly an electron and the emission of a photon; these are in order the ‘alpha’, ‘beta’ and ‘gamma’ radiation you hear about and they are the most common ones, but there are now dozens of others recognized ‘decay modes’.

Atoms are defined by their number of protons and thus when it emits protons it goes down the periodic table by that expelled amount; when it emits an electron it does so from its interior producing a new electron and not from the orbiting electrons, and that changes a neutron into a proton so that the atom goes up one element on the table, or the contrary in the case of a positron with both expelling a neutrino and who knows what else exactly leaves – and when it emits a photon, of much higher energy than those early mentioned from ‘thermal radiation’, it merely becomes less massive, as from thermal radiation, usually after one of the previous too in order to become more stable expelling the extraneous structures of the ‘new element’ it became.

It we then smash two atoms together they can form a single bigger one, ‘fusion’, or if we disturb one enough, as by shooting something at it, we can break it apart, ‘fission’, scattering its internal parts as many particles and other lighter atoms; the first is likely what happens in the Sun as its gravity pushes hydrogen together into helium, which is slightly less massive than the four hydrogens fused to make it so that it ejects its mass as the increased motion of particles and photons which then hit earth and are absorbed back as motion since, as we have seen, that is all ‘heat’ is while the second is how we made the first nuclear bombs, by shooting neutrons into heavy atoms that break part into lighter atoms and release not only that ‘lost’ mass as motion but also neutrons from its interior which then collide and break apart even more atoms leading to a fission chain reaction, and an ‘explosion’ is just how we describe that collective behaviour of an omnidirectional shower of fast moving particles – the first is how every ‘heavier atom’ was form in the universe, although the aforementioned ‘tunnelling’ means that the cumulative smaller disturbances of the environment can selectively make heavier atoms by allowing it to build up new parts without that one-impact ‘activation energy’ smashing them into one, and the second is how we have many unstable elements on Earth, since heavier more stable ones slowly break down giving us that constant supply as the unstable ones constantly untangle themselves into smaller forms. That is, ‘fusion’ and ‘fission’ are merely the change in the number of protons in that structure.

That is what is happening; and I complete the picture by saying that ‘energy released’ is the literal structure that breaks off and when that fragment is not stable as a proton or nucleus is then it collapses to whatever

form is selected by its surroundings into the structure of an electron or photon and so on, in contrast to the insanity that energy is some metaphysical power that the universe consumes and spews back that indivisible prefab species; and when there is no single clear cause for the structural failure, that is no flashy external great impact to attribute it to, then it is likewise those internal processes of the atom interacting with its surrounding conditions that eventually lead to enough perturbation of the structure for it to break apart, rather than the meaningless mystical doctrine of 'spontaneous decay' where the electron just decides to come into existence by consuming the spiritual 'energy' of the atom.

"In order to explain the phenomena of radio-activity, it has been supposed that a certain small fraction of the radio-atoms undergoes disintegration per second, but not assumptions have been made as to the cause which produces the instability and consequent disintegration. The instability of the atoms may be supposed to be brought about either by the action of external forces or by that of forces inherent in the atoms themselves. It is conceivable, for example, that the application of some slight external force might cause instability and consequent disintegration, accompanied by the liberation of a large amount of energy, on the same principle that a detonator is necessary to start some explosives.

...

It seems likely therefore that the cause of the disruption of the atoms of the radio-elements and their products resides in the atoms themselves. According to the modern views of the constitution of the atom, it is not so much a matter of surprise that some atoms disintegrate as that the atoms of the elements are so permanent as they appear to be."

- Radio-activity 270, where so correctly Rutherford says while the legendary Mme Curie did not provide any theory or reasoning for the causes of the atomic decay, albeit leaning to the explanation that they just took energy from the air and re-emitted it; yet the endless usage of 'spontaneous decay' by Rutherford and everyone else led to this current irrationality that 'it is truly spontaneous because it follows different rules from all macroscopic world and logical phenomena'.

Atomic power, and thus the bomb were denied to be possible a few years just before the damn thing was made; the reasoning? Because the decay was then already hard established as beyond the 'logic of the familiar world' and to be 'truly random'; that was their mindless belief and you simply could not make it go faster since it was independent of all things. Although Rutherford just foresaw it there decades before within the first years of the discovery of radioactivity; and his famous 'moonshine' line is not only doubtful, but out of context with a version having a proper 'with our current technology and knowledge' before it. And of course that belief of untouchable randomness was proven false real soon; as just described in fission above we shatter it at will if we simply disturb that structure enough - and yet the insane stupidity that 'decay is random', rather than depending on the state of that structure and its internal processes, remain to this day! It is now also known that neutrinos sometimes collide with the nucleus and cause those disintegration events; and it is currently believed that trillions of such particles pass through every human every second - such immense shower is said to interact too rarely as to usually have no effect 'since the atoms are almost entirely empty space' and even after such mindblowing cause of some disintegration events it is still just called 'random' ignoring all rational explanation that something would have to be the cause of the effect to happen or that there cannot be another invisible thing going through us by the sextillions every second. And therefore, since it is their holy belief that it cannot be anything but random, even though we have shown to break it at will and depend on things, it as a consequence means that the products of it appear from nowhere magically as a universal preset of indivisible elementary particles; and not, as obvious logic dictates, because those were the internal parts or made of the same building block reorganized - all of that absolute mindlessness from the inability of abandoning the baseless belief of randomness, built upon nothing but guesswork and mysticism that they decided to create a different reality 'unlike all other phenomena', and untouchable by the logic of science and its cause and effect, rather than seeing their own ignorance.

The thought that it was not an individually created species by god was unacceptable to them; because that would mean all their holy laws with their equations were mere approximation of complex events, and not truly the source-code of the universe that things simply are compelled by the divine to obey - and so the resources

The so called ‘forces’ follow the same reduction since when any object is accelerated by gravity, magnetism or the other two newcomers we do not see a difference in the object of some kind of ‘gravity acceleration’ or ‘magnetism acceleration’, but merely some undistinguishable and unique form of ‘acceleration’; that is, all ‘forces’ somehow are both ‘unique’ and generate nothing unique

on this last century have been spent in developing those mystical insane ‘explanations’, the equations of quantum mechanics, to describe those results using no internal processes or external influence but solely the magical divine power programmed into those ‘elementary objects’ that give them that ‘natural tendency of movement’, just like Aristotle, that ‘make them wave’ unless ‘forced to go against its nature’ by an interaction ‘collapsing it’.

That is, what I say is that it did not ‘appear from nowhere’, but is a part that broke off from that greater structure; making it less massive – usually even less stable contributing to the eventual collapse into other smaller structures which will happen exactly when those internal processes that keep it stable fail to complete their metabolic pathways.

But I will treat of every ‘elementary particle’ in general since there is no point in focusing that to atomic decay, where it is so clear and simple that they are made of one same thing, when they apply the same mystical generation from nowhere on everything else no matter how clear their origin as part of some bigger structure or reorganization of a same material is; the famous ‘particle accelerators’ shoot things with exact velocities to match some desired energy and observe how that inserted ‘energy’ reorganizes itself into new particles, not exact formulas but produces an array of ‘unique particles’ all ‘at random as long as there is enough energy’, whose characteristics are discovered by how itself or its products interact with the detectors – the most recent discovery, the Higgs boson, is an unstable structure that then may decay into the more stable structure of two photons and by consistently measuring that same total energy, be in photons or some other structures it decays into with two bottom quarks being the most common, we discover the ‘mass’ of that particle that was produced into some discreet packet by the collision and that being unstable broke apart reorganizing those parts as photons, the two photons also tells us it has an even ‘spin’ while the angle they fly off tell us its ‘parity’ and so on deducing the properties that structure had by what was produced when it broke apart.

And yet after doing that beautiful work some raving madness kicks in and they repeat the old doctrines that they are all ‘elementary particles’; individually created with all their characteristics hard-coded on a pre-set and doomed to decay at random just as it was randomness that decided its birth – rather than all having that same building block whose structures give all its behaviours and characteristics, and all exact angles and conditions at the collision defining what was formed and the stage of its stability cycle!

This is directly related to the ‘spin binding slots’ mentioned above and only the study of such structural sea around the atom, that is the exact mechanical processes whose cycles create the ‘nuclear forces’, is that we will finally understand the reason that the lighters atoms become lighter as they fuse up, the reason of why that atomic structure as its maximum stability and tipping point near that of iron and the function of the increase in neutrons in bigger structures as what are the ‘magic numbers’ and how there is no need to actually ‘shoot’ the neutron as mentioned above to break the atom apart as merely drifting near it will make the non-repelled neutron coalesce into the nucleus and destabilize that structure to the point it breaks apart; only then with the actual science of that exact structure we will understand radioactivity and what part of the atomic structure fails, and the processes leading to that failure, and break apart to eject these different ‘rays’ – and only then we will know the limit of the periodic table of ‘elements’ as well as their many strange non-periodic properties that considering simply the electrons does not explain. And likewise all those other structures even smaller than the tomic ‘atom’.

but the very exact same product of ‘motion’ – or better framed, they are the product of motion and nothing else.

That is all they do; and it is superfluous to invent ‘forces’ that do nothing except moving things – the admittance of motion is sufficient and all else extraneous addition beyond justification or necessity.

That is; such ‘forces’, ‘laws’ and ‘particles’ are entirely arbitrary tools that we use to talk about certain collective bits of structured ‘energy’ – but there is no rational ground to say that those are ‘actual reality’ of distinct indivisible powers pre-programmed on the universe together with a ‘transmutation law’ allowing them to be converted one into the other.

And rather to being the design of the gods that made things to ‘have that colour’, ‘to have heaviness’ or ‘to be magnetic’, ‘to have mass’ and so on there is no ‘inherent characteristic’, but merely the product of the underlying superstructures of those particles interacting in exact ways that our modern science somehow decided to neglect to investigate.

Being worse than useless the idea of some ‘finished answer’ and magic ‘law’ has long hindered us to peer further into the actual mechanisms through which the motion of particles would create that ‘macroscopic’ phenomena called as ‘forces’.

Rather than seeking ‘a new law’ or ‘proof’ of some self-realized dark-matter that will ‘fix everything’ and ‘complete physics’ we have to peer further in how these processes are formed and evolve throughout time; and only then we will have both the real description of its moving parts and understand the extant we can generalize in some practical tool as some equation.

When asking ‘what is gold?’ or any other thing we define it by a set of its characteristics.

Gold is that which is yellow in colour; it has a certain weight superior to most of the metals while is more malleable than most up to a certain point – not being volatile nor being combustible or spoiled by fire, but when liquid has a certain level of fluidity and is dissolved only by particular special means.

In case I have the essence yellow colour, the control over the weight, the rigidity, the volatility, the fluidity and so on will I not then be able to combine them to generate gold?

That was the questioning of Bacon against gold being an ‘element’ when it was clearly composed of parts; today by brute force we know those properties to be the product of simpler interactions and not some defined inherent characteristic of that ‘element’ – something that arises on many other objects when the conditions of its building blocks are selected by its structure to be the same.

How can it ever be justified to say some ‘electron’ is such ‘element’ when if we had ‘negative magnetism’, ‘mass’, ‘spin’ and so on we could make? How are all other particles with such characteristic some divine inherent pre-set, and not all merely from sharing some origin and stable component so selected that it causes these ‘macroscopic’ effects? Rather we see they literally appearing from other ‘indivisible elements’; their equivalence in all aspects – and the reduction to the motions of smaller parts that form that superstructure which has the more complex behaviour.

“Such imaginers can put the ‘fire’ on the wood, put the ‘heat’ on the wood and give to it the capacity of being ‘burnt’ as much as it pleases them that no alteration or change would happen only by possessing such inherent characteristics; it is necessary the addition of such movement of its parts that dislodge it from its neighbours and separate them – and to the contrary abstain the thought of ‘fire’, ‘heat’ and ‘burning’ and nothing will be changed on the phenomenon provided solely that there is such power that violently move the particles.”

To which I entirely repeat since I am faced with the same baseless belief that ‘inherent characteristic’ is somehow any explanation of a phenomenon; they too can put the ‘pole’ on the particle, put the ‘magnetism’ on the particle and give to it the capacity of ‘interact with the field’ as much as they want that no alteration or change would happen only by possessing such inherent characteristics, for it is necessary the addition of such motion of its parts for the phenomenon to happen – and to the contrary abstain the thought of ‘pole’, ‘magnetism’ and ‘fields’ and nothing will be changed on the phenomenon provided that we admit simply the motion of smaller particles which multitude creates the environment where we observe those structures and behaviours¹¹¹.

¹¹¹It is an experience farther from our daily life, but in ancient Greece the rubbing of things in amber, the shining ‘ἤλεκτρον’, was known to create a power of attraction in that amber piece; akin to what you might do today with a balloon attracting your hair after being rubbed by wool or some older television, which used a cathode, and your hair – as I did often enjoy doing.

What you might not know, however, is what was reported two millennia later about glass and gems being also able to have that power of attracting things; and further that energized glass attracts energized amber resin, but the empowered glass repeal empowered glass just as those of amber repel amber.

From that it was supposed two ‘amberic’, or ‘electronic’, powers; one vitreous and another resinous which attract their opposite and repel their like – the electronic fluids inhabiting matter.

But it was soon noticed that the two fluids was a needless admission; supposing one single fluid we could have that one material would give fluid to the object while the other merely took fluid away – so that we would see that behaviour where pieces filled with fluid would repeal each other while attracting those that were not full.

You might feel this beautiful, and so useful, logical reduction to not admit needless things quite alike that about the existence of ‘cold’ that we went on about; and it is all rather analogous and examples of the same proper method of true science – admitting no extraneous fantasy, but only what we are absolutely forced to.

However you can also probably see why I used the much more familiar ‘hot’ and ‘cold’; and which ‘kinetic theory’ is today accepted – while for that other phenomenon we are not there yet.

If we were to continue that tale up to our degenerate modern times we would have next that we can see why two filled things repeal each other, but why two empty repeal, then? It was postulated that matter by itself repeals matter, although the idea that they gravitate was already long established. The 'one fluid' was then eventually superseded by the particles of electrons as we truly saw that the change is solely due to the transfer of electrons alone; called 'negative' due to the 'electron', 'amber', being the one that gives them and the glass being defined as positive before hand – thus rather than any two distinct 'intrinsic fluid' of that class of material being passed on it is merely a comparative of their structural response so that when the atoms are disturbed by the rubbing of the materials the electron will naturally 'follow the path made less difficult' go to where it is pulled with more force by the surrounding electrical gradient, thus an item that 'gives', by means of its weaker gradient upon disturbance, will 'receive' if rubbed against an item with even weaker gradient. And naturally as it passes into that less massive state it forms the photonic structure of that expelled parts, but the details of tribology are still little known.

The exact discovery of the electron was quite like how Dalton noticed the discreet packets of the 'atoms' and so too did Faraday noticed that the energy applied in electrolysis would correspond to discreet values needed to separate different kinds of composites into their constituent parts; and after many beautiful experiments we put a droplet of oil on an electric field measuring how much such rises so that at each test we would see different values that would change in exact discreet amounts corresponding to those electrons as 'the basic unit of charge'.

Of course, just like the tomic 'atom', what the observation truly shows is nothing more than the existence of some singular structure and 'packets'; far from there having any necessity or justification to fly to the non-sequitur conclusion that such packet is then an indivisible universal prefab – an independent species created with such intelligent design of intrinsic qualities that cannot possible have any natural origin that formed it selecting for such characteristics.

Still that is how it was taken, and how it is taken today; with the 'two charges' system still quite in vigour since the 'attraction to matter' and 'matter repealing itself' was due to the proton with the 'opposite charge' – even when both produce that sole capacity of 'motion' and form the photonic structure by their wasted energy, and when we literally observe the photon being produced by a neutron that loses parts of its structure, they are still taken as two, or three for the 'neutral', 'fundamental things' and not reduced to their sole common effect.

A few decades later we found quarks with even 'more basic units of charge', but the foolishness of elementarily remains until it is proved the absolute opposite; where then they just take that new thing and turn it into the new inviolable holiness wasting so much resources in vain worship of such fantasy of elementary species and their 'laws' left by god with no origin or cause.

The 'atom' is clearly broken by the discovery of the electron; much smaller things that composed the complex structure shown to be quite tomic – and further radioactivity was being described at the same time truly destroying 'the immutability of the elements'.

"It has also indicated that the atom itself is not the smallest unit of matter, but a complicated structure made up of a number of smaller bodies.

...

It is necessary to suppose that the atoms of the radio-elements are undergoing disintegration, in the course of which parts of the atom escape from the atomic system."

– Radio-activity 1 and 95, which at very rare times so clear and precise he was.

Yet most of the time, as already mentioned, the unhappy 'spontaneous random decay' was mindlessly preferred and out of nowhere all scientists were using such worthless unnecessary mysticism, which 'mean life time', concept common to the 'decay' of molecules too and concentrations of chemicals in metabolic processes, of a particle is easily recognized as the instability of its internal structure and that being formed by a myriad of different conditions they start at different parts of those internal untangling and how those interact with the surrounding disturbances; and then the missing piece of how we degenerated to our current state shamelessly accepting that mysticism publically is in the interpretation of a paper in thirty four which was read as 'If we accept that photons can just come out of nowhere why not just make other things do that too? Much

We seem to have reached the same impasse as René on his reduction of macroscopic phenomena, namely those of ‘heat’ and ‘fire’, to ‘motion’, but while that is indeed infinitely superior to the clumsy needless admittance of all those imaginary and virtual generalized ‘forces’ we do not need to follow them all in simply postulating ‘motion’ as some magical force of everything and taking ‘energy’ as that metaphysical characteristics that possesses and imbues ‘matter’.

Even that which was the absolute unquestionable metaphysical admittance of ‘energy’ as some intrinsically separate spiritual thing that acted on ‘mass’ has been brought into question on the interpretation of the ‘energy-mass equivalence’; although, even after reading the foundational scientific texts of so many cultures, I have never yet encountered a dissertation giving a definition and explanation to ‘what is energy’ and ‘what is the change in motion’ – they have been taken for granted and followed from intuition ever since the inception of the concept on our most primitive ancestors.

So forgive my crudeness here for I have little reference in how to proceed as we dive into the wildest uncharted territory our human mind has yet conceived of reality; the product of pruning all we can and all that is extraneous in our theories – the result of applying Logical Succession to

easier than doing all that science and explaining’ – although Fermi merely used that unspoken ‘procedure’ of the formation of photons as an akin event of things not yet formed rather than a that constant number of internal particles Rutherford believed, ‘un procedimento simile a quello seguito nella teoria dell’irradiazione per descrivere l’emissione di un quanto di luce’ meaning merely that ‘Il numero totale degli elettroni e dei neutrino non è necessariamente costante’, but as most believed baselessly that the photon is some ‘elemental particles’ formed of nothing but that unique ‘photonic essence’ then it led down the backward path of mystical pseudoscience rather than eliciting the clear reality that such ‘bubbles’ had to come from some common material and building block, that there was much more to the ‘atom’, rather than any ‘elementary’ thing that had to be given the most fantastical fields and magical powers of randomness and spontaneous generation to try to save their insane creationist belief in immutable species to explain how it could have all those behaviours with nothing composing it or influencing it around.

Yet, by that pure accursed influence of their beliefs, they postulated the electron to be indivisible and rolled with it, just as electromagnetism and its charges are called some ‘elemental force’ of nature, although more recently shown to converge as ‘the electroweak force’.

So using that as the starting example would be an awful idea; and rather I have to fight against this notion today of magical elemental powers within, as I did on the radioactivity note just now – as said on the exact same argument all those powers are meaningless, as all they cause is a change in motion, just as heat, and without any such extraneous admissions the mere acceptance of motion already describes all that the phenomenon causes. The complex behaviour of ‘heat’ on the macroscopic scale is what we see with the complex behaviour of charges, and of every other ‘force’; which with more zoom would show to be nothing more than the motion of small particles building those structures and whose following of ‘the path made less difficult’, the selective pressures of its environment, produce all apparent ‘orderly’ behaviour they show from afar.

But alas Physics has been stuck on those worthless ideas; rather than ‘fluids’ we now call them ‘fields’ – on the most unscientific way ignoring all mechanism of the process and merely quantifying the ‘law’ that some deity intelligently designed to act on that exact way upon that and that other unique indivisible species.

what we can infer of that common ancestor of all phenomena in this natural world, and the only things we are justifiably forced to admit in order to explain them all.

The ‘equivalence’ challenged the metaphysical nature of energy only slightly and with no trouble to defend their beliefs most invented a mystical ‘transformation’ between ‘mass’ and ‘energy’ written on the background of the universe to mediate that ‘change’ just as not long before they had filled the gaps of the old ‘energy conservation’ with the mathematical unrealities of ‘potential energy’; I say this separation of them is extraneous and entirely arbitrary, that ‘mass’ is merely one of the structures formed of ‘energy particles’ – and with this many phenomena that we have catalogued we have more than enough to dispel that mystic energy-matter dyad to instead elicit what characteristics that common ancestor to all forces has to all its manifestations, so that we can peer further and wonder at the nature of ‘changing motion’.

When a body enters into motions what does it lose or escape it to cause such transformation of its behaviour? Or what is left or what does it gain? What expands and contracts; what is united or severed – what propels it or hinders it?¹¹²

Zeno was a man full of silly thoughts, but let us imagine his arrow; or the molecules in our cappuccino or any object liable to a change in motion.

His experiment is about stopping time so that the arrow stands still; and if we move to any other instant of time it will be still – so that doing so in infinitesimal amounts of time he would just see the arrow teleportating from some minimal distance to the other and at no moment ‘be in motion’, but always occupying some space as if ‘at rest’.¹¹³

Aristotle ‘denies’ that as wrong, although I am unsure of what he is even supposing that Zeno is asserting, by saying that he does not grant that there is ‘indivisible time’, or any other magnitude, but that it is a continuum where it can always be divided further to find intermediary steps of motion between any two points; I say that their discussion is entirely meaningless as they are trying to perform logical operations on ambiguous, and therefore meaningless, variables since

¹¹² “Exempli gratia; in omni generatione et transformatione corporum, inquirendum quid deperdatur et evolet, quid maneat, quid accedat; quid dilatetur, quid contrahatur; quid uniatur, quid separetur; quid continuetur, quid abscindatur; quid impellat, quid impediat; quid dominetur, quid succumbat; et alia complura.”

– *Novum Organum* Duo VI, which the entire V-VI is too large to be put on the note, but beautifully fits as the necessity of anything being composed of all its parts and whence I took the example of ‘the making of gold’ above.

¹¹³ “Ζήνων δὲ παραλογίζεται· εἰ γὰρ αἰεὶ, φησὶν, ἡρεμεῖ πᾶν [ἢ κινεῖται] ὅταν ᾗ κατὰ τὸ ἴσον, ἔστιν δ’ αἰεὶ τὸ φερόμενον ἐν τῷ νῦν, ἀκίνητον τὴν φερομένην εἶναι οἰστών. τοῦτο δ’ ἐστὶ ψεῦδος· οὐ γὰρ σύγκειται ὁ χρόνος ἐκ τῶν νῦν τῶν ἀδιαιρέτων, ὥσπερ οὐδ’ ἄλλο μέγεθος οὐδέν.”

– Φυσικῆς Ακροάσεως, *The Auscultation of Physics*, VI.

they were not rigorously defined – that is, they walk about ‘motion’ and ‘space’ and ‘time’ or all else as a ‘given’ on their own ambiguous assumption without defining any of it so that their discussion lacks all coherence and sense.

My illustration, however, is about that arrow; and let us borrow some more of his characters so that a second arrow is shot by Achilles and a third one by the turtle – and now with the three arrows in the air we ‘stop time’, or rather ‘take a snapshot’ recording that moment to be analysed.

Here we have the three arrows standing still, but when we consider some future time what is it that will make them ‘move’ to a different place while the arrows on the quiver or on the ground will remain rather still?

How is the ‘information’ that the arrows should move present on that still frame?

Or is there some information not contained in that picture? Something beyond the physical reality and that we need to transcend into the spiritual world to see the complementary information about its motion and all the intrinsic properties, the perfect Platonic forms, that the arrow partakes from?

The arrow of Achilles is by far the fastest and that of the turtle the slowest; when they begin to move again they accordingly will move different amounts – is that his unrelenting fury fuelling his arrow or any other such metaphysical power from the perfect Platonic dimension beyond the reach of our reckoning that somehow spiritually acts on the arrow or is it something really physical and tangible on the object?

The metaphysical meaningless is about how modern ‘physics’ view it; with no explicit description they ‘just accept it’ from their ambiguous gut feeling that ‘everyone knows what motion is’ – and that is as good as the gut feeling about the existence of ‘heat’ and ‘cold’.

Just as heat was imagined as some metaphysical ‘energy’ that on the background of the universe stored the information of how much of it some thing contained so today ‘motion’ is that background log of all the characteristics that a particle should have; while the ‘particle’ itself is some meaningless featureless, as it is indivisible, blob which simply channels that universal background log to define its behaviour.

The neglect to such pivotal point of all our understanding is astonishing; and that ‘intrinsic spiritual power’ is not only ridiculous, but entirely unnecessary to admit.

I say we do not live in a cave where all we see are the shadows of those extradimensional perfect forms that all species inherit from, but rather than some key to that magical dimension where ‘the information of motion’ and all others intrinsic characteristics of ‘matter’ are I say we can analyse

the still arrows and see they are indeed different; if only we have the tools to peer further enough into those units of energy-quanta that compose each of those objects.

Just as when a photon hits it and transfers 'energy', and the collision between objects lose parts forms other photons, so too we can peer into those objects and see all those parts of energy-units; how it is less massive before transferring energy and how it becomes more massive in the number of its 'energy parts' when receiving motion from some other 'mass' collision or photon – so that likewise the fastest arrow is more massive than the others and with the capacity to analyse all its parts we would promptly distinguish between them by how many more parts one has over the other.

That instantly lead us to the problem that 'motion is a vector'; even if the number of its parts is the 'magnitude' what is the 'direction' component of it?

We can have Aristotle on the other side of the field shooting an arrow with identical 'kinetic energy' as that of Achilles so that when we 'stop time' we can count the same number of 'energy parts'; the same magnitude.

What differs now between those arrows?

The answer to that is also the answer to 'what is motion?'; and it should easily follow that what differs between those two objects of identical number of pieces is merely how those are disposed – that motion is an structural property of them.

And regardless of how pleasurable it is to say something so weird to our senses as that 'movement is a structural property!'; I feel foolish and superfluous right after; for what characteristic is not the result of the structure?

All complex behaviour and property is simply the product of the underlying structure; all 'energy' is merely a certain amount of some homogeneous particle – and the movement greater objects show is a product of that structure.

The 'vis insita', inertia, of bodies 'resisting motion' when at rest is merely that exact amount of particles needed to build the structure; the 'inverse square law' of how 'forces' weaken has been supposed to be related to the three-dimensional space it spreads equally with the distance and so too the exponential relation of energy to velocity hints at the organization of its structure in space, since a single structure that impels some object at a speed of 'thirteen' is equivalent to the fusion of the smaller structures of 'twelve' and 'five' or 'three, 'twelve' and 'four' – such 'complex motion' with its accelerating capacities and retention of its form are thus a phenomena from the underlying simpler structure below, and rather than the metaphysical 'interior force' acting on it forever to keep it moving until affected by another metaphysical 'force' it is merely that structure

that will keep its behaviour until changed as the radiation of gravity certainly slows it down and any other product of its internal processes might eventually untangle that 'mass' into an incoherent fragments in the 'void' where it 'quantum fluctuates' into unstable shapes collapsing until a stable one is found.

The idea of 'frames of reference', Galilean or otherwise¹⁴⁴, also dies at the moment that we give a physical cause to 'motion' rather than the unknowable spirit possessing 'bodies'; since 'who is moving' is 'relative to each frame' only because of the ignorance and primitive tools of the observer, but if we have the instrument to peer into those constituent parts that compose photons, mass and motion we can tell by how massive some is, that is how many parts it has, and by the organization of its structure that it is indeed the one in motion, or that it is us who is moving – every little quanta of motion in a particle makes it different from all other in degree of motion, and how much more its inner parts, so that they are only 'indistinguishable' as every coin of a certain value are indistinguishable from every other, save for their relative positions, by our naked eye which tool lacks proper resolution to identify how very different each of those gigantic structures really are in their composition and inner processes.

The way 'motion' is seem as a continuum and photons likewise change so much that we cannot yet point the minimum difference in 'energy' between two photons show clearly their composite nature, in yet uncountable parts of those quanta of energy that form its structure, and the multitude of things in that sea we cannot see.

Now what is indistinguishable is if a moving thing received that motion from colliding with any 'mass' or with a 'photon' or if by 'gravity' or any other 'force'; we will not find 'electron-motion' and 'gravito-motion' or such 'different kinds of motion' – every 'force' produces the exact same effect and impart the very same thing upon that which they act up, all that can be differentiated is how that 'motion' was deposited. They thus can be nothing else than that different disposition of that same 'particle of motion'; the separation of which as 'fundamentally different' then becomes false since it is entirely arbitrary when it is clearly the same process merely under a different structure and condition that select for a more specific transfer of its components – which different structures receive it differently and thus its behaviours, as 'the attraction and repulsion of magnetism', are produced.

¹⁴⁴ I describe a thought experiment just ahead on the note about 'the constancy of light' which already allows us to ditch the madness of 'frames of reference'; albeit just like before we could only supposed the 'relative age' of things as older or younger than some others today we can also just crassly give the 'relative velocity' of how every point is moving in respect to each others and if it is us or the things that are moving – and what I describe here, 'counting the units of energy', is the future advance in our capacity to eventually produce the tools to analyse the absolute motion just as today we give not some 'relative age' but aim at some range of its absolute age.

In order for those smaller parts that compose motion to form an environment and be selected into those more stable structures they themselves need to be moving, a simpler motion in a fixed rate rather than being liable to the complex phenomenon of acceleration, but I will treat of it afterwards; for now let us go deeper into this most hyped phenomenon that ever was, which is the phenomenon of how things compress under pressure and the entirely unrelated idea that ‘mass’ produces infinite energy giving everything in the universe kinetic motion towards itself in the form of ‘universal gravitation’ – like Anatomists or Physicians we will talk of such unclean things not because it is pleasant, but by the profit to be gotten therefrom¹¹⁵ in the prognosis inferring the past in what are the causes of this disease, analysing the present of how it acts and then predict the future in what we must do so that we elicit the cure that will bring a better hereafter, alleviate the present and prevent that such harmful insidious past is repeated again¹¹⁶.

¹¹⁵ “An anatomist or physician may speak or write his judgement of unclean things; because it is not to please, but profit.”

– Leviathan I: XIII.

¹¹⁶ “Τὸν ἰητρὸν δοκέει μοι ἄριστον εἶναι πρόνοιαν ἐπιτηδεύειν προγιγνώσκων γὰρ καὶ προλέγων παρὰ τοῖσι νοσέουσιν τὰ τε παρεόντα καὶ τὰ προγεγονότα καὶ τὰ μέλλοντα ἔσεσθαι, ὁκόσα τε παραλείπουσιν οἱ ἀσθενέοντες ἐκδιηγέμενος, πιστεύοιτ' ἂν μᾶλλον γινώσκειν τὰ τῶν νοσούντων πρήγματα, ὥστε τολμᾶν ἐπιτρέπειν τοὺς ἀνθρώπους σφέας ἑωυτοὺς τῷ ἰητρῷ. Τὴν δὲ θεραπείην ἄριστα ἂν ποιέοιτο, προειδώς τὰ ἐσόμενα ἐκ τῶν παρεόντων παθημάτων. “

– Προγνωστικόν, Prognostication, I.

III – De Mundi Systemate

Objects are compressed under stress; a stress is some acceleration, but any object currently moving at any speed have had to have been accelerated in the past so that it remains compressed under that stress until it is relieved by stopping – if we measure a moving object we will then measure that compressed state and not its ‘true unstressed length’ and if our ruler itself is moving then it is compressed and differs in measure to a still ruler.

Therefore all our measurements are not an indication of some ‘true length’ and ‘absolute space’, but merely a comparison to those objects since we can produce no ruler immune to that effect; likewise our clocks are not a different kind of instrument that somehow ‘taps into the dimension of space’ and extracts information from it, but exact machines made precisely by the measurements of those very same unreliable rulers and subject to the same distortion of compressive stress – therefore all our notions of ‘space’, and ‘time’, are relative to the defective rulers we use.

This perfect and complete description of the ‘relativity’ of our methods of measurement was provided on the eighteen century by Boscovich.¹¹⁷

¹¹⁷ “21. Illud autem notandum inprimis ex hoc principio immutabilitatis eorum, quorum mutationem per sensum non cognoscimus, oriri etiam methodum, quam adhibemus in comparandis intervallorum magnitudinibus inter se, ubi id, quod pro mensura assumimus, habemus pro immutabili. Utimur autem hoc principio, quæ sunt æqualia eidem, sunt æqualia inter se, ex quo deducitur hoc aliud, ad ipsum pertinens, quæ sunt æque multipla, vel submultipla alterius, sunt itidem inter se æqualia, & hoc alio, quæ congruant, æqualia sunt. Assumimus ligneam, vel ferream decempedam, quam uni intervallo semel, vel centies applicatam si inveniamus congruentem, tum alteri intervallo applicatam itidem semel, vel centies itidem congruentem, illa intervalla æqualia dicimus. Porro illam ligneam, vel ferream decempedam habemus pro eodem comparationis termino post translationem. Si ea constaret ex materia prorsus continua, & solida, haberi posset pro eodem comparationis termino; at in mea punctorum a se invicem distantium sententia, omnia illius decempedæ puncta, dum transferuntur, perpetuo distantiam revera mutant. Distantia enim constituitur per illos reales existendi modos, qui mutantur perpetuo. Si mutantur ita, ut qui modi succedunt, fundent reales æqualium distantiarum relationes; terminus comparationis non erit idem, adhuc tamen æqualis erit, & æqualitas mensuratorum intervallorum rite colligetur. Longitudinem decempedæ in priore situ per illos priores reales modos constitute, cum longitudine in posteriore situ constituta per hosce posteriores, immediate inter se conferre nihilo magis possumus, quam illa ipsa intervalla, quæ mensurando conferimus. Sed quia nullam in translatione mutationem sentimus, quæ longitudinis relationem nobis ostendat, idcirco pro eadem habemus longitudinem ipsam. At ea revera semper in ipsa translatione non nihil mutabitur. Fieri posset, ut ingentem etiam mutationem aliquam subiret & ipsa, & nostri sensus, quam nos non sentiremus, & ad priorem restituta locum ad priori sequelem, vel similem statum rediret. Exigua tamen aliqua mutatio habetur omnino idcirco, quod vires, quæ illa materiæ puncta inter se neccunt, mutata positione ad omnia

But of course when mentioning ‘relativity’, or anything of Physics in general, the name of a single man on the popular mind eclipses all other geniuses in History; which vague notions of some supreme incomparable intellect precedes any knowledge of the man himself or his work – but although it is doubtless a fame which so greatly exceeds reality he still contributed some and his fantastical puerile notions are not only a legacy but came to define all of modern science.

The notion of ‘relativity’ is very old since two observers describe an event differently if they are not both standing still to each other; from this we have Galileu establishing a way to convert between two observers so they can both agree on the result and know what the other observers –

reliquarum Mundi partium puncta, non nihil immutantur. Idem autem & in communi sententia accidit. Nullum enim corpus spatiolis vacat interjectis, & omnis penitus compressionis, ac dilatationis est incapax, quæ quidem dilatatio, & compressio saltern exigua in omni translatione omnino habetur. Nos tamen mensuram illam pro eadem habemus, cum, ut monui, nullam mutationem sentiamus.

22. Ex his omnibus consequitur, nos absolutas distantias nec immediate cognoscere omnino posse, nec per terminum communem inter se comparare, sed æstimare magnitudines ab ideis, per quas eas cognoscimus, & mensuras habere pro communibus terminis, in quibus nullam mutationem factam esse vulgus censet.

Philosophi autem mutationem quidem debent agnoscere, sed cum nullam violatae notabili mutatione sequalitatis causam agnoscant, mutationem ipsam pro æqualiter facta habent.

23. Porro licet, ubi puncta materiæ locum mutant, ut in decempeda translata, mutetur revera distantia, mutatis iis modis realibus, quæ ipsam constituunt ; tamen si mutatio ita fiat, ut posterior illa distantia æqualis prorsus priori sit, ipsam appellabimus eandem, & nihil mutatum ita, ut eorundem terminorum æquales distantiae dicantur distantia eadem, & magnitudo dicatur eadem, quæ per eas æquales distantias definitur, ut itidem ejusdem directionis nomine intelligantur binæ etiam directiones parallelæ ; nec mutari distantiam, vel directionem dicemus in sequentibus, nisi distantiae magnitudo, vel parallelismus mutetur.

24. Quæ de spatii mensura diximus, haud difficulter ad tempus transferentur, in quo itidem nullam habemus certam, & constantem mensuram. Desumimus a motu illam, quam possumus, sed nullum habemus motum prorsus æquabilem. Multa, quæ huc pertinent, & quæ ad idearum ipsarum naturam, & successionem spectant, diximus in notis. Unum hic addo, in mensura temporis, ne vulgus quidem censere ab uno tempore ad aliud tempus eandem temporis mensuram transierit. Videt aliam esse, sed æqualem supponit ob motum suppositum æqualem. In mensura locali æque in mea sententia, ac in mensura temporaria impossibile est certam longitudinem, ut certam durationem e sua sede abducere in alterius sedem, ut binorum comparatio habeatur per tertium. Utrobique alia longitudo, ut alia duratio substituitur, quæ priori illi æqualis censetur, nimirum nova realia punctorum ejusdem decempedæ loca novam distantiam constituentia, ut novus ejusdem styli circuitus, sive nova temporaria distantia inter bina initia, & binos fines. In mea Theoria eadem prorsus utrobique habetur analogia spatii, & temporis. Vulgus tantummodo in mensura locali eundem haberi putat comparationis terminum : Philosophi ceteri fere omnes eundem saltern haberi posse per mensuram perfecte solidam, & continuam, in tempore tantummodo æqualem : ego vero utrobique æqualem tantum agnosco, nuspam eandem.”

– Philosophiæ Naturalis Theoria: Supplementa II: 21-24.

then much later Maxwell working on electricity had to parse that old relativity with the speed of light to get the a relativity where from all frames light had the same constant speed.

From that luminiferous aether that carried the waves of light we obtain the idea that all other bodies will have to use that transformation parsed by the speed of light in order to agree with it and that it is their passage through the luminiferous medium that so compresses the bodies in that direction.

On the twenty century Albert struggles through dozens of pages, and does an awful job, trying to say those words so clearly and succinctly put by Boscovich; rather than the simple ligneous or ferrous measuring stick of Boscovich he, after much help, used a metal rod, and the square of Potsdamer, and a rock, and a train, and clouds, and sound and lighting to postulate that 'objects in motion are compressed' - that is his 'Special' theory and he uses it then to show how he later almost realized, but clearly failed to do so and truly generalize the discovery as Boscovich had already done, that in order to be in motion the object had to be accelerated at some time in the past, thus he makes his 'General' one that 'gravity does that too'.

The quantification of that distortion predicted by Boscovich was furnished by that resistance of the aether medium and Albert merely followed in using that equation; the 'Special' one is entirely superfluous as just said since the distortion happens at the moment the object suffered the stress of acceleration rather than any such 'special case of moving things' which merely hint at that previous distortion of acceleration it suffered in the past - and the 'General' one is perhaps even dumber since it merely iterates Newton that 'gravity is acceleration' since acceleration is what caused that 'Special' one in the first place, and there are not 'several kinds of acceleration' but all are undistinguishable and equally all 'forces' compress the things they act upon.

From the propositions themselves we see how superfluous they are adding nothing to what we had, but rather creating meaningless and unnecessary divisions to that single phenomena of the object compressing when put under pressure; how much worse it gets when we consider than that 'to explain that' he goes into the mindless fiction of some background plane of the universe that has to be bending to cause that effect on things that are moving fast and to mass to magically produce gravitation around it.

It is often said in science communication videos that 'imagine how weird it would be if an engineer had discovered Relativity instead of Einstein' when mentioning that satellites are always delayed by some exact amount so that the theory would be discovered by necessity when they noticed that phenomenon; yet for decades those equations were known and already quantified by the randomly-picked proportion of it to the square of the speed of light, and contributing nothing to this specific subject Albert merely changed the name 'luminiferous aether' to 'fabric of space' as the cause of that length contraction - and somehow pure magical 'universal background

properties' were then accepted over the logical postulation of some 'wind', although of course all that 'relativity of measurement' is the very same exact observation that if you press hard on something it does indeed gets compressed.

This is all there is to it; a statement about how our current tools fail at the task of being some perfect measuring rod – and that is the only conclusion to all thought experiments presented by Albert on the Relativity arguments, namely that all we know including our tools suffer compression upon being acted on by a force and maintains that compressed state if that force accelerated it.¹¹⁸

¹¹⁸ You are encouraged to go check his book for the general public in relativity and see how Albert has the reasoning power of a child; he badly presents the effect and then ploughs through with the most fantastical scene and crassest molluscoidal analogies to try to explain how those magical properties would explain the observation – where at no point any justification is given, but as long customary of Physics he makes up the entire thing and all is valid as long as that magic has some equation that sufficiently approximates the experiments.

The experiments and effects are indeed undeniable, as noticed a century before him and quantified to the relation to light decades before, but all the magical admittances is as unjustifiable as needless to explain the phenomenon.

It is hard to distinguish what is pure fantastical analogy to the imagination and what he is actually arguing to be the state of reality; the very 'geometrization of space' was criticized by him as simply an analogy as how to visualize the equation, and yet he often pushes far into that analogy and stands by it as undeniable truth that all Quantum has to agree to his definitions of the 'universal background'.

After years of frustration in detecting the aether I suppose the community was ready to throw in the towel and gladly welcomed the complacency of adding another law to the universe; since one or two magical divine designed laws beyond the realm of human knowledge was a trivial addition to their long list – and with that they could free themselves from the struggle of doing science since promoted to the unknowable ways of the divine it was no longer a natural phenomenon that required an explanation of how it worked. It was now just another 'law', conveniently written on the source code of the universe so that they did not have to worry about trying to make sense of the mysterious ways of the gods who just decided the universe was to be like that.

If I do have to explicitly mention the infamous scenario of a twin going to space and coming back to his brother who aged ten years, or more simply 'observing a clock from a gravity well' then here it goes: a motor made to tick at some exact rate by some ruler will thus be slower when 'under greater pressure' as it is compressed by acceleration, and likewise tick faster if moved out of the 'gravity well'.

That is all that is observed; the addition of 'time' on the 'relativity phenomenon' is meaningless since all we measure is space which by distorting would causes that effect on those motors in space called clocks – and as we are seeing the invention of that 'space fabric' too both explains nothing of the phenomenon as is it also nonsensical in describing it.

We might 'age slower' under the deformation of acceleration if it uniformly delays our metabolic processes and particles 'decay slower' because it is not 'random' and 'spontaneous', but clearly depends on something,

Which, as we have seen, at the moment we stop taking ‘motion’ as that spiritual property to consider it as a real tangible thing that we can rigorously define and measure, the result of some physical structure of the object, we easily see that the faster it is the more distorted its shape becomes; rather than once again invoking the gods and their design to some universal background of magical properties and laws hidden there so that we can satisfy our itch for curiosity by happily ‘discovering’ it – at the moment we give up the creationist idea of individual species we are forced to admit ‘mass’ is just some stable structure formed by those ‘energy particles’ and which by the addition of more particles as a collision transfers it to it as ‘motion’ it simply cannot maintain the same shape.

Likewise when we do become able to zoom in and count each particle in that quantifiable motion of acceleration we not only can tell who is exactly moving, as aforementioned, but use the dimension of that very particle, which will have a constant velocity and be not liable to acceleration which is the ratio of the directionality in the structure of giant complex objects, as the measuring rod to quantify, or rather elicit the nature, of ‘absolute’ time and space; and knowing the parts that compose the object we will know exactly the processes that had to run their course to form it and to get at some point so that we will know what was absolutely simultaneous to it, ‘exactly so many ticks’, or not.¹¹⁹

some structural property, which is changed by motion; and that is about it – ‘bending of space-time’ is so fantastical it is not even worth of going into the science-fiction category.

¹¹⁹ The paper of the ‘Anni Mirabilis’ goes heavy establishing the speed of light as the absolute limit of things, but constancy of light is as artificial as ‘the seven colours’ just to fit the ‘seven tones’, the works of hepta-rayed Apollo god of light and music in the Greek myths harmonizing with the seasons of the moon in the seven-days week and the seven known ‘planets’ and fixed in modernity with Ilaac on Opticks I: VI: II, just as the Chinese divide it in five colours to artificially make-up that universal harmony with their pentatonic scale, five planets, five elements, five tastes and so on, as in Shang Shu: Yu Shu Yi Ji III, so that likewise that artificial constancy is made-up by it itself being taken as our measuring rod; all the ‘simultaneity’ confusion means nothing beyond that we have no means to get the information of events instantaneously, but are limited to how that information travels to us – the speed of light being the fastest thing known he forced it to be the background property by which clocks should be regulated and rods modified to artificially keep ‘the constancy of light’, but when thusly we consider the nature of ‘energy’ and ‘motion’, the constituent parts of the photonic megastructure, we descend unto a world mute of all light.

But as seen light can only ionize when it has sufficient energy to disturb the system enough to push the electron out of the structure; so that a set of rays, like from the sun, that cannot properly ionize a metal sheet while we are standing here at Earth waiting for it will be able to do so if we accelerate enough towards it – it is an asymmetrical process that from all other slower ‘frames of reference’ we will see light that should not be able to ionize that material ionizing it.

If a stationary measuring device ‘collapsed the wave’ by finding out the energy of that photon it would still ionize the metal after it the same way; beyond all logic of ‘converting’ back and forth the ‘rod lengths’ and ‘clocks’ and the ‘energy to those frame of reference’.

Because there is no need for the mystical 'waves' to explain the 'Doppler effect' since there is absolutely no difference from any car crash and every other collision; the 'increase in frequency' is because they are literally arriving faster as we drive into them, but their energy would be the same if we were able to count the component parts of it – and what changes is we crash into it faster or slower by moving towards or away from it, like every other thing in existence, so that the impact has a higher or lower transfer of energy.

Having some monochromatic lamp we know very well the strength of that photon; the 'blueshift' and 'redshift' perceived is exactly that relation of our motion to it as we crash harder or softer by it being faster or slower than the speed of light to us – the 'stationary observer' will just see that light that cannot ionize his own plate ionizing the plate in motion because the plate is moving towards the light and like with every other thing if you move towards it there is a greater impact by the sum of speeds than if you are moving away from it.

There is absolutely nothing more to the phenomenon; the invention of the 'constancy' of that speed and then those mystical explanation to justify something that is not even real are obviously wholly unnecessary – rather by considering reality we get hints of how the shape distorts with the disturbance of motion and how it is less or more prone to be ionized by some disturbance.

This neglect real cause and mechanism of the effect, of how do a moving thing truly differ from a still one, is what has hindered us from knowing how such shape it takes is more stable to the external and internal processes that lead particles to decay; as an actual scientific reasoning would lead us to investigate – instead of the absolute mental incoherence that 'time was slower and the spontaneous processes actually depends on time', simultaneously saying something is random independent of a cause and somehow still that 'spontaneity' can still be dependant of something.

We lack the tools to actually count those parts and definitely prove that instead of that magical self-realized distortion of 'spacetime' there is that simple everyday reality of every other collision; that is all Relativity tell us – a mockery at our current lack of better tools.

But to suppose that it means then that all those complex objects are uniquely created species by the hand of god and there is nothing more to reality than that intelligently designed background magic of some indivisible mechanisms never to be known to us is some ridiculous pseudo-scientific cultism that is truly beyond measure – it is the endless repetition of the ancients calling 'water' elemental since they had no means to peer further, and on their case that their capacity of thought and logic is too deficient to suppose any explanation that will actually provide knowledge and advance science rather than one that is pure self-realized complacent divine magic.

I have argued that by pure theoretic means at the end of the last chapter, and that is quite enough as we have established the way of reasoning since we will never be omniscient to always rely on a proof in order to deny worthless fantasies, but it is rather surprising that the 'speed of light' hoax holds when we do so many detailed tests using it; so let us see a simple thought experiment.

For example an object can just 'probe' itself to promptly find out that it is indeed the one in motion; if we have a known amount of fuel that can be burnt to go from zero to one length per time, or 'increase our kinetic energy by one', and we see a planet ahead that from 'our frame of reference' seems to be moving towards us at 'one length per time' as we are still with another alike mass also still in the space near us then as we burn that fuel the planet should change from one to two lengths per time while the other mass formerly in our still frame should become negative one length – that is, only if we truly were still. Or if we were at 'minus one' and now are still, but that detail is promptly made clear by repeated 'probes' with any arbitrary amount of fuel divided in equal parts, or the absorption of a same amount of outside energy as from a photon rather than any 'expelling fuel', showing different changes each equal increase in energy which are proportional to my velocity.

However by doing so we will know that we cannot now possible be 'still' and further that the fuel spent cannot possible correspond to that acceleration of the planet that is an increase in kinetic energy many orders above that fuel energy; we know that it is us who accelerated from zero to one, that the planet indeed has that one length per time towards us and that the mass left behind is truly still because we can attribute it only to

ourselves – if the planet seems to accelerate by merely around zero dot forty two and the companion go backwards with that same magnitude then we know that the planet was still all along and that both masses were moving towards the still planet at one length per time, and that now we are moving at the velocity of the root of two as that is the only valid conclusion that matches our observation of the total kinetic energy after that perturbation with us having now two total kinetic energy as one unit was added to our motion so that the proportion of the change in velocity by burning some fuel to the total kinetic energy of the system tell us the magnitude of the motion of every body in it as one giant coherent frame no matter from which point it is so analysed giving a single ‘true’ result without the need to ‘translate’ every ‘possible frame’, which are actually impossible and wrong interpretations since they disagree on the total kinetic energy of the system, to any other.

It is thus impossible to hold any ‘still frame’ as anything besides wilful ignorance since we can probe for the exact relation between the magnitude of the motion of every body which correspond exactly to their relatives ‘kinetic energy’; as ‘the inertia depends on the energy content’ there is an ‘absolute motion’ as the ‘truly moving’ bodies will have more energy than the other ones and be literally more massive so that the change in velocity is proportional to the increase in kinetic energy in relation to the total it already had – furthermore being aware of our own motion makes us measure all light in that system as any other moving body of non-constant speed, merely as much faster or slower as the sum of ours velocity and its.

Of course that is also obvious from the ionizing event above; since the light source moving away will cause that monochromatic light to be unable to ionize a material it formerly could – so that the only logical supposition is fairly direct, that the quantized emission of certain bands of light is based on some mass-like ‘core’ to the structure of light and that regardless of the massiveness of the double-cores that the atomic shell structure produces on it transitions they are all launched at a same equal speed, and thus energy content depends on how fast that core collides with things just as ‘frequency’ is likewise the product of literally how frequently things collide with that core and not some magical relation to its energy content besides that a faster moving thing will collide with more and have more violent collisions.

The analogy breaks down rather fast as the ‘core’, just as all ‘mass’, is the very same ‘energy particle’ merely differently organized and I go through the redundancy of merely saying there that the more energetic one has more total ‘energy parts’ while all have the same body plan from whose structure they acquire their speed; so that the current motion of the object that emits it influences its body plan, its speed, lowering or increasing its energy content while still producing different bands of structures – where the concepts of ‘acceleration’ and the ‘force’ of a colliding mass are abstraction that only get in the way of properly visualizing the mere transfer of ‘energy particles’ between two structures at every interaction.

For example the electrons had a problem on their model that the beta decay emitted the already-existing structure from their core since it was too absurd of a force to be able to accelerate it to such extreme speeds in so short of a space and a time while Quantum merely ignored it by making the electron appear from the random works of gods; the correct idea that it is not pre-existing, but formed by the same mechanism as light from the energy emitted from the main body by some perturbation and collapse of its structures, already gives us the view that it can be formed already with its structure organized in such directional motion, although just as easily it could first form the electron megastructure and after ‘accelerated it’ – to which we have to abandon the classic metaphysical macroscopic ‘force’, that is equal to some useless inert ballast called ‘mass’ time the ‘acceleration’ increasing the spiritual energy of the ‘velocity’ of the object, to see that instead of any ‘transfer of energy’ or ‘acceleration’, which is by definition a derivative dependant on time, we can have a instantaneous change in velocity, with no gradual deposition of ‘energy particles’ or time-dependant acceleration, caused by any disturbance that affects the shape of that structure.

All of this is just the direct inference from my description of ‘energy’ and ‘motion’ with no new information or insight, so let us just move on from this point which is as stupid as two people discussing if something is ‘hot’ or ‘cold’ because of they, being either hotter or colder than it, ‘feel a different thing’; our instruments

But Albert, daydreaming as usual, went further into the strangeness of molluscs and the ignorance of lone naked men lost in space and tried to elicit the wildest of unjustifiable fantasies to provide many imaginary forces of why did an object when suffering a force compressed; and so he concluded that it must be some universal background that gets folded, distorted and compressed as the 'fabric of space and time', rather than a closer proximity of the constituent parts of the object, pretty much simply re-naming the common aether-contraction of the time to his even more absurd 'spacetime continuum' – as self-realized as them, and even more undetectable since it is now some universal metaphysical property rather than just something that bends exactly as much as the distortion so to avoid detection.

That magical imaginary background and its laws of his conclusions do not in any way follow from those observable premises presented; nor are such absurdities warranted for anything – and yet lacking all cogency, justification and necessity he just forged on with his fantastical inferences built upon nothing more than imaginative whim.

He somehow tried to squeeze 'gravity' into it and made it to be that very distortion in 'spacetime', although no reason is given to why would any object 'fall' from its rest state into that of having more kinetic energy; his entire argument is about 'gravity' being indistinguishable from any 'acceleration', as he simulates with his very weird imageries of a forever accelerating disk and an object tied or not to a hope above it – thus it is that 'gravity' is merely acceleration, as classically defined, and produces no more that distortion and effect than the acceleration of magnetism or any other 'force'.

Still, somehow, it stuck as the ultimate theory of gravity; even when it explaining absolutely nothing about the mechanism for that magic acceleration as the entire argument is about that acceleration itself has the effect of compression upon our measuring devices – although he does indeed veers off with the most fantastical and unjustified divine design to explain 'why things compress under stress' so that he flies from the valid observation of the compression of objects to some imagined background fabric of space and time that can be taken as nothing but an insane hallucination as it is no possible logical conclusion from the presented statements about the compression of a measuring rod as it is compressed under the pressure of being accelerated.

Now Ifaac himself said gravity needed an 'agent' and it could not be instantaneous; it was the fanbase who made it the magical instantaneous force by forcing the mere equation, a tool of approximation, as some absolute universal law – which considered merely when the force was

rendered that nonsensical since we can now measure the absolute temperature – and the same is with motion with no 'valid frames of reference', but literally just the energy contained and true structure of the object which is disputed by 'different observers' purely from their ignorance of what they are even talking about.

acting, and not the irrelevant ‘before gravity got there’, and somehow got so distorted as to stimulate that it was always acting.

Albert was right in repeating what Ifaac said in it not being instantaneous; the link to the speed of light, however, was far from any necessity or justification – the aether theorists just guessed when looking at the equations and made that supposition, which he merely repeated it all under the name of the metaphysical background rather than a physical cause.

And so as it seemed about right people again simply just accepted that he must have guessed right and ‘discovered’ the parameters that god coded for the world.

A ‘grand proof’, somehow the ‘gravitational waves’ predicted before relativity itself is usually taken as the big one to swallow the theory wholesale¹²⁰, for it is how that adjustment to the equation of ‘the law of gravity’ approaches Mercury so much closer than the ‘classical law’ did; how the ‘distortion in space and time’ explain the faster precession of the planet, however, is beyond anyone’s guess – how, exactly, would a ‘space distortion’ that distorts the planet just as much make it go any faster?

An increasingly popular idea is that of ‘cogravitation’; where yet another magical force is invented to match ‘magnetism’ as a set rather than reducing like phenomena to an equal quase – and so they theorize that the acceleration of ‘mass’ generate some secondary field which if they adjust the equations just right could account very precisely to that precession of Mercury that it was tailored to explain.

In the General theory it is already taken that mass truly equals energy and that therefore energy, that is ‘relativistic mass’, do generates gravity just as ‘absolute mass’ does; and the new addition somehow wants to put that the ‘relativistic mass’ somehow generates some extra secondary gravity, ‘cogravity’, besides the normal one.

Perfectly self-realized, but ‘the equation does match the observation’ and it might as well get accepted; since one more ‘law’ and unique species is a casual addition to the world – although the post hoc nature of it, rather than the mind-blowing guess of a prediction proving true, is a very hard hurdle for it.

¹²⁰ As said, gravity was not before said to be instantaneous; it simply was not given a speed and studied nothing more than the point-effect at some exact distance once they are properly acting upon each other – but even if we take that ‘instantaneous gravity’ and the original equation we still have ‘gravitational waves’ as any body moves closer and farther it will create a gradient with the strength of gravity going up and down, a ‘wave’.

Just like MOND closely matches the observation of distant galaxies, since it was tailor-made for it¹²¹, and it is quite properly ignored by most; the absolute joke of the deus-ex-machina of ‘dark matter’ is even worse – so that with such meaningless self-realized ‘theories’ of magical forces intelligently designed we are just lost, since just as the General one more closely matches Mercury they both err to the most gross degree when dealing with the movement of galaxies.

Merely our ‘law’ is some random approximation based on that occult magic belief; no different from the estimation of a ‘thermodynamic law’ or ‘hydrodynamic law’ as we observe our little section of the river – whichever magic approximation we get to our direct surroundings could never hold far away on the different environments of the river, and how much less could it ever explain the complexity of the immense sea.

I am far from using the baseless unjustifiable claim that the universe is inconsistent and things ‘work differently’ on other places, but rather merely that we are just now peeking at the myriad of conditions within our heliosphere and it is beyond our current imagination the immense storm currents and cells of the interstellar wind and the multitude of forms in the immense ecosystem of the intergalactic medium; how much less can we account for them all to properly predict the weather of how planets and stars, mere visible particulates suspended in it, will truly behave – a ‘law of gravity’ neither explains anything nor can it exist any more than a ‘law of weather’ could predict all our atmospheric phenomena by some mystic guiding force rather than the consideration of all its inner agents and particles that by selective pressure form all monumental landscape and cause all those tempestuous effects we observe as patterns and order.

But although accepted by many as ‘true’ and as an ultimate discovery of some fundamental designed law of the universe, the ‘geometrization’ of a distorting space was just a figure of speech and example to visualize the results of that equation. Albert only provided, or copied the equation, the measure of how much an object distorted; and said that since all objects distort then we have no unchanging measure of length, and therefore neither of time – the assertion of Boscovich, adding simply the quantifying equation discovered decades earlier for how much it is expected to be compressed, ‘the change of the shortest path’, when exposed to a force.

He was, at least in name, against the geometrization itself; space did not ‘bend’ but it was merely a way to visualize those results – today’s popular science, and even most of scientists, give not a care

¹²¹ On this note we have the common silly claim that ‘there are things only Quantum Mechanics can model’; taking the electron as the poster child when it was, just like MOND, tailored exactly to do just that – and as soon will be discussed it is most often very wrong, but all other results are ignored for the sake of some bizarre ‘average behaviour’ where rather than predicting or describing anything they list a bunch of states it might for any unknowable divine design come to be solely when we ‘look’ at it.

to make those fantastic claims about a bending spacetime fabric and that is truly an awful distortion of what he proposed.

Still, he is quite to blame since although in name he did not endorse the literal interpretation of the geometrization he not only used it a lot, but he was extremely biased to push the analogy of the geometry too far; as when denying the quantum effects he based it solely on such concept of the background characteristics he imagined to be inviolably true.

Even then the geometrization is indeed very creative and fanciful in dealing with the single most mindboggling part of gravity; since things usually either do not interact with others, and pass on with all its energy, or interact and transmit that energy to another object as itself loses energy – yet that is not as we observe planetary gravity.

If we are floating in the middle of empty space we seem to feel the same force and increase or ‘relativistic mass’, our energy, by accelerating the same amount that it would affect us if we were buried in the centre of a planet with dozens of kilometers of rock between us and that gravity source; the much simpler magnetism can be blocked by objects, but gravity just goes on unabashed through everything accelerating them all with no visible diminution to its own energy – supposing the graviton structure it collides and ‘transmits’ energy accelerating all other things while it itself maintains its energy unchanged.

Energy which seems to disappear to nothing solely with the distance rather than with any interaction.

The fantastical magic of the geometrization of space as a wave pulling them all down to that state while it itself is unchanged is indeed very artful, although completely meaningless in any rigorous context of describing how exactly any of that occurs beyond the usual intelligent design since, as Dalton explicitly justified his laws, ‘an agent so important in nature cannot be doubted to be controlled by general laws’.

As sip of our cappuccino we observe out of the window that the languor of the overcast sky rains down; and looking at the droplets of water we know they are dragged down by the phenomenon of ‘gravity’.

Erstwhile I thought I had the answer to some observation I raised whilst watching rain fall; I would ask ‘when does the droplet have more energy?’.

When it is in the cloud up above? When it hits the puddles on the ground? Or somewhere in between?

The puddle is 'hotter' than the cloud so out of these two we can easily pick one; or should we account some inherent magical 'potential energy' within it? But by falling it also went farther to all those galaxies to the opposite side of the universe increasing that energy all the same as it decreased that energy by approaching others, did it not?

Rather than such imaginary thing we can quite ascertain the superior energy measured at the higher temperature at the puddle, but when it started to fall from the cloud being accelerated it pushed the air molecules in the way transferring energy to them and making them more massive and when colliding with the puddle itself it rose a wave as the ordered behaviour of molecules under the same pressures.

How does it have more energy on the puddle than on the cloud if during the entire way it transferred energy to the air and the water? How did it leave a state of less energy on the cloud, gave all such energy to its surroundings and it ended in a state of even greater energy?

And then how much more disturbing it becomes in case I take the said water, or any object, so that I am spending my energy, losing mass, to accelerate it up; where naturally it goes on gaining mass - until I finish stretch my arm and I spent all such energy even if the object, having decelerated and stopped, has the same mass as before energy was inserted on it!

Its mass leaked out to the unknown!

It is unthinkable that it would also 'pull on the earth with an equal and opposite force' and not only receive all that energy from 'nowhere', but also increase the mass of the earth at the same time as earth increased the mass of the droplet; like on the early mention of a gravitational assist the planet had to end up with less energy if the other object ended up with more.

The absolute failure at stoichiometry of the energy or mass particle is beyond clear on all scenarios, but let us take two equal objects to make it clear.

We are some massless power in an empty universe as we propel these two objects forward, they being at some distance from each other; as they receive energy they become 'more massive' - and as its 'mass' increase so does the strength of its gravity, or their 'relativistic mass' which does produce a 'distortion in spacetime' just like mass.

Thus travelling on the course of the vacuum they will attract each other with greater force than when they were less massive.

After some time they will eventually touch each other and at that point they will have their original mass, the mass that was added by their initial acceleration and then supposedly a third mass that began to exist in consequence of the attraction between the two bodies accelerating each other to

a centre point; so that they have now more mass, or energy, than the sum of their original masses and that initially inserted into them.

If we did this with them both already touching from the beginning we would end up with a different result, since they would not give any velocity to the other; and likewise if we try to separate them we will have to expend that energy, but if we first stop them from moving, as taking that energy on a motor, their mass will decrease and it will require less energy to separate them than when they were more massive – so that we take more energy from the system than originality there was, and we repeat it infinitely with our motors first collecting the motion energy before separating them and accelerating them again.

Such absurdities are the result of accepting inherent powers that magically perform that phenomena by design instead of the proper stoichiometry of its parts.

My thought before was that the answer was rather clear; just like by having any heat they would radiate that as photons, which is just the structure formed by the many energy-particles lost during the transference of them from one body to another, so too gravity is some internal process within that structure we call ‘mass’ and which radiate its insides so that other bodies, being struck with that free energy, receive it.

The droplet has mass and would be irradiating energy all the same, but much less would earth receive from it than it receive from the earth; and if indeed the earth showed an equivalent acceleration then it would be because those irradiated particles were part of the structure of matter, as a vortex of particles around it, which being absorbed by the droplet did not get re-absorbed by the earth so that it destabilized the forces on the earth pushing it on that direction it did not receive the expected particles.

More massive objects then would receive more energy simply because they would interact more with that shower of particles; which fits so very well with light since the acceleration experienced by objects can be described on the geometrization truly as all masses accelerating at the same rate just as that each mass receives proportional energy to it – but the bending of light cannot be explained by the geometrization since the red or blue shift does not occur in exact wavelengths of space, but solely by interpreting it as the rate of interaction of that energy.

While five hundred grams and eight hundred grams all accelerate the same in space, by receiving energy exactly proportional to their mass, that is not so with light; a five hundred nanometres wavelength will only change its range by an exact proportion to its higher energy so that a eight hundred nanometres wavelength will change much less the length of its wave in space to account for that proportional energy change.

The two objects in vacuum there will only accelerate as much as they also lose energy on that radiation of gravity; and indeed end up with less energy from all the gravity that was not captured by the other body – so that they would not ‘remain in motion forever’, but just like objects cool down it would lose energy until becoming too unstable to maintain its structure.

Thus the droplet would have most energy right before transferring it as motion to the puddle; or whenever it achieved its highest terminal velocity.

From that also comes the necessity that gravity does indeed gets shielded and weaker, but that the masses are simply too small to make any visible difference to us or to separate what they shield and what come from them themselves for more massive bodies.

But while all that is a possibility and not by far any stretch of a supposition, I eventually saw that the conjecture was rather meaningless after I elicited the nature of movement; since by movement being a structural property we cannot truly say that those objects gained any energy until we can truly count those energy-particles forming it – instead of a complex ‘force carrier’ that would enter the mass and somehow be absorbed to change its direction towards the collision rather than away we can much more easily suppose some prion-like particle that would simply disturb the structure of that mass, rather than being absorbed, so that the new structure pointed towards the origin point of the prion-like while the prion would move on as an enzyme not being consumed on the reaction, but merely decaying with time as it moves on fainter and fainter.

We cannot truly measure if a planet has lost energy to the tiny probe, but on every scenario it merely would continue on losing the constant rate it always emit of such particles outo into space.

Could that restructuration of Mercury, turning its ‘mass’ into ‘relativistic’, become a component as if the planet were lighter so that it ends up precessing faster?

Perhaps the prions eventually reach a stable state where their decay slow down, and that makes the apparent less decay of gravity on the scale of galaxies?

Or perhaps gravity collides with things and rather than being absorbed or re-structuring it without changing its energy it is knocking off some number of its energy-particles so that the structure gets selected to keep those that move it ‘down’ on the direction of the collision.

To explain the blueshift of light, however, becomes much more trickier; and all those explanations are plausible physical phenomena already known rather than any magical force – my conclusion is that the speculation into this unknown ‘force’ can still not bear any fruit since we know too little about all these structures to have anything better than our current crass generalizations, and which acceptance of intelligently designed laws, even when shown to be so flawed and imprecise that requires the making-up of ‘dark matter’ explanations, has hindered us

from peering further into what truly causes this weird motion that became the grand force igniting stars, collapsing planet and forming us.

It is rather harder than the obvious answer that photons might not perfectly stable structures and so lose energy as a product of its internal mechanisms or by the mere interaction with the sea of particles on the non-empty 'vacuum' it traverses; which rate of interaction is proportional to their total energy and not some fixed wave of length equally taken from all.

The observation that photons lose energy over time exactly proportional to their total energy followed by a conclusion that 'then the 'fabric' of the universe is expanding and taking that energy' is perhaps the most insane and non-sequitur jump of logic that I have ever seen; it flies straight to the top of the mount of madness – to see an object losing energy and propose the 'explanation' as some unique and entirely new and inexplicable phenomenon is as bad as you can get at guessing.

Much worse than simply 'unnecessary' and 'unjustifiable' such statement can only be found when someone goes out of his way into the realm of fantasy to create the most fantastical scenery that he can. It even makes the self-fulfilling aether-contraction of 'dark matter' seem rational in comparison¹²².

If tomorrow we 'found out' a 'new force' which could magically fix all our measurements and 'complete all of Physics' that would be little better than the statement that 'god made everything'; engineers would be elated at the dream solution to everything, but our understanding of the universe would be the same worthless answer that 'that is just how it is' as we continue ignorant of the mechanisms underlying all such unique species and magical forces.

I cannot possibly elicit what is that structure or even provide, by means of pure logical deduction, some better quantification that will not be so awfully wrong at the sea of long distance; but I do say it is a sea of a myriad of factors to consider and that the change of model from those 'laws'

¹²² And therefore, too, all our fascinating cosmology is little better than the old creationist myths; not only in the way it captures the heart of the public, but because it is likewise based on some divine incomprehensible power that intelligently designed those laws and particles – thus all our current cosmology is no more than some very wild fan-fiction of the silly 'fabric of spacetime' fable made by Albert.

It is not to be expected the photon to be a 'perfectly stable structure', but from its internal cyclical processes to radiate energy; likewise the sea of particles responsible for the 'fluctuations' which they have to cross – both proportional to the total energy of the photon, as we observe rather than some fixed spatial ration, and who knows what other myriad of factors are involved in 'making light tired' as it traverses the non-empty void.

We simply know too little of the photonic structure and about as much of the conditions of our stellar surroundings, how much less of the intergalactic medium, to make any claims about the wider universe and what our observations mean – the 'origin', that is the 'initial conditions', can only come after we start to peer even deeper than those more fundamental components of motion that form every 'mass' and known 'particle'.

and 'species' is what will free them from being cryptozoologists seeking that intelligently designed species, the 'law', that does not exist at all.

It is too much conjecture and only actual studies on the details of its parts will reveal how it works; all we can affirm is that it is not some divine magic energy intelligently designed to do that, but the product of the underlying structure – there is a 'law of gravitation' as much as there is a 'law of weather', that is purely the product of thousand folds particles which a simplistic equation of some magically designed force will never describe, and rather than 'universal gravitation' it exists solely to those objects capable of the increase and decrease of acceleration and not to anything smaller or those very 'energy-particles' that compose the structure of motion.

IV – For Whom The Bells of Inequality Toll

On this short part of the work I will treat of all the many experiments that ‘proved Quantum’, or ‘supported it’, by ‘subverting the expectation of predictability’; namely that of ‘hidden variables’ – I will do so, like the entirety of this work, with a proof by Invariance. I will use the theorem of Bell as an example to elicit some invariant present on all other experiments and from it argue that the state of ‘correctness’ could never be reached from those experiments with that invariant.

Namely; the assumption of intelligently designed species individually created.

The paper about ‘elements of reality’ is quite pleasant in so simply bringing a proof by contradiction by showing an impossibility that means the original supposition has to be wrong, or ‘incomplete’; yet it failed spectacularly as they tried to use an argument *ad absurdum* against the most absurd minds ever known – the quantum world just gobbled up entanglement and as true madman embraced the insanity as show that their religious doctrines surpass all logic and ‘classic thinking’.

But while the paper was praiseworthy, much less so was Albert who disapproved it as ‘the elements of reality’ did not bother him; his sole problem was that quantum disagreed with his own imagined ideas about the configurations and limits of his magical ‘universal background’ – he was right in denouncing the illogical randomness, but on very wrong grounds to assert it.

But the main point I elicit from that famous duel of ideologies was that Albert had already lost from the very beginning; when the supposition was accepted that ‘there can be any magical particles that have any complex behaviour as long as we are able to describe some state-machine as a function’.

Quite akin to Epicurus arguing that god cannot be good and using his own arbitrary definitions of both goodness, god and every other variable he used; at moment that the assumption ‘if god is real...’ is accepted, just as any other baseless claim, any myth can be invented to justify those mysterious ways – as high as the heavens are from the earth, so too the assumption throws us on the worthless admittance of any other baseless claim.

The entire fight was made upon the idea that truly are ‘elemental particles’ that appear from nowhere independently of anything, albeit weirdly equivalent in energy and other things to the previous process that happened just there; and as they saw something non-random, but a relation between the two, they kept their doctrines and followed on with their illogical explanations – building ever deeper on the most meaningless supposition – and so they discussed back and forth about what magical intrinsic properties those elements were allowed to have and how to

harmonize their fantasies of the universal background with it, rather than explaining the phenomenon of how two particles that came from a single process could be related.

Well; a child could tell it simply was not random – a same process and environment created those two and they are thus complementary parts. As related as the angles of the intersection of two lines; by knowing one angle you suddenly know the opposite and complementary angles to it – even the opposite of the complementary!

And be there a parallel line far away you know the exact angles of that intersection too; as soon as you measure the angle of your line, voilà you know with no delay the other angles!

How could those angles communicate to it each faster than light? How could you know the angle far away by only measure the near one if the information does not travel faster than light?

That was the problem Albert had with it; and by merely being rational for a second and knowing the reality that nothing is random, but the product of the process that produced it, he would instantly have his answer – but with their heads in too deep they simply discussed upon the inviolable assumption of those species specially created at random, a baseless assumption not only beyond any justification, but one which had absolutely no reason to ever be postulated on the first place.

The common conditions of the environment produced those related results; just as all of its other parts and internal mechanisms can be nothing more than the product of that – and not some yet another magical ‘hidden variable’ as it was ‘created at random’.

And thus too the bells of ‘Inequality’ toll in vain to this foolish meaningless argument of who guessed right at how god designed that species to be; it merely tested which fiction was closer to the observed on experiments – and there being no randomness governing it, but being related as the product of a same process, it did indeed shew the relationship of their common origin rather than the randomness baselessly hoped, apparently, by Albert.¹²³

¹²³ That is, the ‘local hidden variable’ argues for the independent randomness of each of the spins, or any characteristic, measurement on the other axes; Quantum then rather goes against itself and says that they are not really random, but are correlated with each other – so that the measurement on one axis will allow a ‘better estimate’ of the other axes.

Thus when measured we do not see a perfectly random dice-playing for each variably individually, but a correlation as predicted by Quantum itself; a correlation is no causation, but triggered Albert denied the magic of that distance communication – but as it is no causation it rather strongly advocates against the very idea of randomness as it points at some original process which correlated them all as the product of some exact cause. So the test shows that it is not ‘truly random’, but correlated by the process that forms the particle, and it is astonishing how such show that each measure is not ‘absolute fifty per cent randomness’ is so praised

He instead should have used his rare demonstration of sagacity and used the later ‘quantum fluctuations’ as another obvious example of ‘Brownian motion’, although even when he did so he was arguing for the nature of ‘heat’ as kinetic motion not daring to suppose the Brownian motion as that exact atomic scale of nature yet; so it would be too much of a stretch to hope that he would truly use the myriad of invisible particles interfering with bigger objects and being also the material that forms new structures in accordance with the conditions of its environment – as atoms are, and any quantum fluctuation surely too that smaller world which reactions compose all so called ‘elementary particles’ we observe, which are merely the most stable ones since the less stables are less fit and so promptly decay back to its component parts.

The Brownian motion of small particles is not ‘random’, but the exact product of the myriad of collisions of those ‘small bits of matter’; which bigger things are simply too massive to suffer so much influence by it – not from some ‘bigger wavelength’ of the bigger thing, but ‘Quantum objects’ are merely small enough to be clearly acted upon by those even ‘smaller bits of matter’ that compose the sea responsible for all Quantum ‘randomness’ and ‘fluctuations’.

But the phenomena of such particles appearing and disappearing before their eyes is just ignored; they are just ‘virtual’ – ‘they go away so quick we do not even need to explain’¹²⁴. How could be it any clear the wilful denial of the sea of particles whose ‘macromolecules’, or structures, they form form? The very ‘atomic’, but certainly still very tonic, material that forms all the so-called ‘elementary particles’; the influence of which shoves such tiny things ‘in random motion’ while too weak for us to see any effect bigger objects.

I went through a bit of the history of our sciences, but it is still nearly incomprehensible how they so blindly insist on the worthless doctrines of the Aristotlean elements and on the mindless convenience of attributing behaviours to the mystical ‘laws of nature’; so ingrained in their old faith that the endless historical examples of its failure and the very reality before our eyes is not enough to dissuade their fantastical dreams of the occult.

Albert scratched at the concept when he had the idea to ‘make everything as fields’; one idea which could perhaps give a common origin and cause to the ever-growing list of ‘elementary particles’ or like his energy and mass equivalence destroy further the eternally standing doctrine of dyad of matter-energy or particles-fields, but it was rather superfluous, just as our modern

as a plus in favour of the theory of randomness instead of a critical blow to the idea those characteristic are magically summoned from the universal background without a source that so produces and relates them all as mere products and parts of some same process.

¹²⁴ Even worse than the spontaneous generation of animals, that at least ome from something, they just ignore things coming from the literal supposed void.

standard of quantum field theory, making up new magical powers to add to the old ones rather than reducing by necessity that all of matter and said ‘forces’ or ‘fields’, and the ‘energy’ they ‘produce’, were nothing but ‘motion’ – or the ‘energy-particle’ which compose everything differing merely by its organization to make all different ‘elements’ and the gradations of motion.

These two reigned supreme and every common man has heard their names, yet that does not mean there are not ‘alternatives’ and fringe theories to it; even then I found none to be worth of any mention here; they can easily be shown to be superfluous and failed on the very structure and logic of its conclusions, so do not expect me to go down into the worthlessness of Strings here – thus I rest my argument here, and all of the ‘support evidence’ of the ‘Quantum predictions’ are by the same argument solved with the simplest of logical intuition¹²⁵.

¹²⁵ I attack its structure and pseudo-scientific method, but perhaps the reader will benefit from some quick sketch of what are these particles mentioned in this most modern model; as the reader has already seen the basic of how most things are made of ‘atoms’ and their components that are the protons, neutrons and electrons – just as about their radiation changing those components and thus building ‘new elements’.

The Standard Model is ‘our current understanding of how the world works’; it divides the ‘particles’ into two main groups based on their ‘spin’, which is some ‘intrinsic property’ of how they behave – ‘bosons’ have an ‘integral spin’ and ‘fermions’ have a ‘half-spin’.

As was mentioned earlier the atoms have exact areas where electrons can fit, their ‘shells’, which can have up to electrons and they must have ‘spins’ that point at different directions. That necessity to ‘have different quantum numbers’, as not being in the same shell with the same spin direction, is the behaviour of ‘fermions’ which limits how many of them you can have on some area by that number of ‘available states’; as for ‘bosons’ they do not do that exclusionary behaviour and so we separate these two main groups.

On the fermions we have, as just mentioned, the electron just as also some tiny neutral thing called a ‘neutrino’; both of these are ‘generation one particles’ and there is the ‘muon’ and ‘taun’, and their neutrino counterparts, which are ‘generation two’ and ‘generation three’ particles often described just as ‘more massive electrons’, and more massive neutrinos for its generations, as each generation is much heavier than the previously – still, as mocked earlier, all of them are considered ‘elementary particles’. These six then are called ‘leptons’ and are separated from the six other fermions because they are not affected by the ‘strong force’.

The other group of fermions are ‘quarks’; there is the ‘up quark’ with a two thirds positive charge in comparison to an electron and the ‘down quark’ with a one third negative charge – and then the generation two and tree with much heavier quarks with those same charge, although the generations of quarks are a little stranger and more charming being more different from the ‘first generation’ than the variation found on the lepton family. They then participate on that ‘strong interaction’ that is ‘some force’ that ‘binds the nucleus together’ so that we do not find quarks flying around like leptons, but in certain clusters known as ‘hadrons’; two negative quarks and a positive one will form a the neutral hadron of the neutron and two positive and a negative will have exactly one full positive charge forming the proton – now you know where those two come from! Although I suppose it is an absurdly unsatisfactory description at this point, and the ‘down’ and ‘up’

quarks are very light so that the three of them account for less than two per cent of the proton or neutron mass so that it is magically said that the mass of the protons and neutrons come, somehow, from 'the force between them' while less stable nucleus are more massive than the sum of protons and neutrons because of 'the extra repulsion in them'; the meaningless concept of 'mass' finally losing all sense, but still mindlessly used as if it means something concrete. These three-quark hadrons, and any odd-number quark structure, are called 'baryons' and we know several two-quark hadrons which, with any even-number structure, are called 'mesons', but even a neutron is unstable and will decay in a few minutes if it does not have a proton nearby to stabilize its internal processes and complete its metabolic pathways and those mesons are much more unstable in the conditions we have observed them in.

For most leptons we just observe them falling from the heavens into the Earth as the energetic particles of celestial phenomena collide with our atmospheres, but for the quarks we have discovered them by probing how electrons scatter; if you shoot an electron slowly to a proton it will seem like a homogeneous 'point-like' particle, but if you shoot it with more force it will show a pattern on how it is reflected thus giving glimpses of the structure below as if it were three particles while with even more force these 'valence quarks' that make up only two per cent of the mass are shown to be accompanied by a 'virtual' sea of quarks - 'we were wrong in the proton being elementary but this that we just found out certainly must be the basic building block of the universe that were designed to act just like that with their complex random behaviour and there certainly is nothing left to find out nor any underlying structure to explain those properties and behaviours' is somehow the agreement that our modern sciences reached, or just renamed the old wrong one, for the model of the universe over half a century ago.

That is twelve 'unique elementary particles', although most of them are the same thing with a slight tweak on its mass, and there are other twelve that are the anti-particles of each; for example the electron has the antielectron or 'positron' which is 'identical but with a positive charge' and so too the muon and tauon have the antimuon and antitauon, but for some reason, as that 'they are just negative energy on that unique magical field', these are omitted as unique particles in the model.

These were the fermions; the other group is smaller and called 'bosons' by that mentioned difference in their 'spin behaviour'. One boson is our old friend the photon; it is 'the energy carrier of magnetism' - we have talked much of this very contentious thing, but here we can add that 'it couples with any charged particles' which excludes neutrinos e some of the bosons. Another is the 'gluon'; another 'massless particle' like the photon, but for carrying the 'strong force' now - they are emitted by quarks and when absorbed magically transform the other particle into a different 'elementary particle' of another quark, and so keep the hadrons together by flipping the quarks non-stop like that besides creating new quarks that usually disappear decaying right after back into gluons although sometimes they form their own hadrons. By colliding things in our accelerators we observe the decay of hadrons we three different 'jets'; giving us the three different gluons plus their three antigluons for a total of eight combinations of them which then affect only those certain quarks and gluons contained on the two-types combination formed and in some unimaginable way do the thing it was intelligently designed to - those unique intrinsic power of each are called 'colours' and their 'anticolours' and that name and their chromodynamics only show how much of a ridiculous joke the entire model is with people just making up arbitrary forces and particles to magically deus-ex-machina the phenomena as long as they can give the best statistical approximation to the results of experiments rather than any description of how any of that happens or the rigorous exactness of science.

Two other bosons are just called 'W' and 'Z'; contrary to the other two mentioned bosons they are very massive and on the beta decay, when a neutron emits an electron and becomes a proton, we can see that the neutron converted one of its down quarks into an up quark and a negative W boson which then is what breaks apart into the electron, and neutrino, of the 'beta decay' – how exactly any of that happened? Refer back to my long critic of it interpreting that as the metabolic pathways of those structures reorganizing it – on the standard model it just happens because that is the intelligent design of the universe who created these pre-set templates of 'elementary particles'. The Z likewise, as every boson, is just summoned by the universe for no reason but to collapse right after serving as some messenger between particles that the gods apparently were too deaf to know how to make them communicate by themselves without these intermediaries 'force carries'; on this Z case it transmits some 'energy' or change of spin but not changing charge or quark type since it is 'colourless and neutral', but since the W has charge there is this weird overlap between the forces since this weak one intrudes on the electric one while also affecting non-charged particles – yet instead of abandoning the impossible-to-maintain idea of uniquely created species that fulfil their niche in nature by being intelligently designed to do so they just united them in the 'electroweak force' since the supporting crutch of some magical power that simply by miracle performs that complex behaviour is just too convenient to abandon.

The last boson is the Higgs; it 'interacts with matter to give them mass' – see back all the Platonic mockery that a thing simply 'partakes more of the perfect Form of heaviness' as the divine creators made it to 'break symmetry' and receive the blessings of mass in the due proportion to each species.

Nowadays the ruling theory is Quantum Field Theory; where there is an universal 'electron field' and the so called 'particle' is actually just some area of higher energy in that field – from coming from nowhere and sharing all those characteristics and changing into each other while all being uniquely designed 'elemental particles' with no component parts we descend then to deny the ideas of 'particle' altogether and consider these magical fields where some bundle of energy in them is what we call 'particles'. And then there are the equations that merely list 'the most probable states' and give a probability of the 'possible results' at the interaction of those bundles of energy in the fields colliding in space; with absolutely no explanation of any mechanism, as I mocked this entire treaty, or any rationality at all – with the wildest range of virtually infinite states where no care is giving to have any idea what is happening or to know anything for certain, as Physics for the last four hundred years is just the description of the Sensorium of God and all just happens and is as He wills it.

Gravity is not described in it, but the 'graviton' would be another massless boson; which simply spreads around being produced in infinite numbers as some intrinsic power of every 'mass' and give energy to every particle it encounters throughout the universe attracting them towards its source.

This is the basic sketch of our modern degenerate and insanely irrational model of the universe; with it we design some things at the atomic level by building giant tables of predictions hand-tailored for each atom or molecule we are working with – and after tweaking it endlessly it manages to predict the chances of the most common outcomes nearly right most of the time, if we ignore all the other nonsensical results of the equation by making special rules forbidden them and every time we find something that exists and breaks those arbitrary rules we make up new 'conserved numbers' and 'symmetries' to pile up new divine laws to protect the equations from the data of reality and anything else of the kind to avoid doing the actual science of describing how something happens step by step in an exact reproducible process.

At the moment we ascertain ourselves that there is no justification to the claim that this random particle we have is some indivisible atomic species then all of the occultist doctrines of Quantum are instantly destroyed; all inherent magic and uncertainty exist iff, if and only if, they are indeed some intelligently designed inviolable packet of the universe – which they have been taking for granted such assumption supported by nothing but pure blind faith, and which as been proven wrong time after time even in the recent past.

When we analyse upon which grounds rest the claim arguing why those random particles cannot possible be divided and why they are sure there exist no smaller phenomena to explain it ‘classically’ by logic but solely the intrinsic inherent magic, then we at once untangle all the twisted mess of Quantum as nothing more than the product of crass ‘macroscopic’ approximations feeding the occult beliefs of fertile unscientific minds.

Forever ‘uncertain’ because by design the ‘right answer’ simply does not exist until we ‘observe’ and get the ‘random answer’ the universe rolled dices for when it noticed that we were about to peek.

To tie up that with our previous atomic understand we need to introducing the ‘nuclear force’ between those hadrons that keep the atoms together; which is caused by the quarks organizing themselves more to one or another side, like neutral molecules do when put together, and thus it is a ‘residual force’ from that ‘strong force’ – what is a beautiful empirical tool, but sadly such liquid drop imagery is used to promote a vision of the most mindless mysticism.

Bringing up Bosovich one last time I can say I enjoyed how ludicrous his model was using harmonic equations, that is an equation that oscillates as a wave, to explain how everything; which were bands in that harmonic where the force becomes repulsive and only something with enough force would manage to overcome that band of repulsion to the next of attraction - and so build complex systems upon those change of bands, but being impossible to ever pierce the last band since the repulsive force shoots to infinity as it approaches zero distance.

The aforementioned ‘residual force’ is quite as convenient as that, but much more direct and less convoluted; it acts at some exact distance being extremely strong so that it holds the protons and neutrons in place, but suddenly becomes extremely repulsive if any closer than that and becomes extremely weak if you move away from that sweet-spot – so that it only affects that narrow range keeping the nucleus neatly organized and explaining why alpha radiation is so common, two protons and two neutrons, since by the exclusion principle there is one down spot and one up spot for each.

It thus makes atoms with even numbers much more unstable while the positive protons gradually build their mutual repulsion while the residual nuclear force gets weaker so that heavier elements need to have many more neutrons, contributing to the residual and not to the magnetic, than protons; and when they decay they shoot alpha particles becoming smaller and having too many neutrons for the lower magnetic repulsion so that it is observed the beta decay happening in such situations where too many protons or neutrons turn into the other for a more stable form while the excess energy still left in the system is emitted as the photon of the gamma decay – and still it is mindlessly called ‘spontaneous’ with stable ‘magical numbers’ and all these processes blamed on those mystical forces that both repel and attract and disappear rather than the obvious damn structure and its internal processes, but I will not even say it at this point since I already described the actual scientific way to seek not magical intelligently designed ‘forces’ but the mechanical process that select for all such structures to form and decay, the ‘weak-particles’ of Ws and Z being intermediary forms between the original structure and the products they eventually evolve into.

All Physics as we know it, which is the dyad of hand-tailored 'laws' to guide intelligently designed 'particles', breaks apart at the moment we, as Charles Robert Darwin did, start to question upon which grounds we can affirm that there is no other, or no better, possible explanation for what we observe than that of separate individual acts of creation for every species.

There is nothing wrong with a mathematical description and it is the rigorous way we will define and count every component as exact integers as we come to truly describe reality, but a fantastical state-machine that lists every known configuration and returns a different set every time we peek at it is no quantification and measure at all; how much less a proper and exact description of anything.

It from definition differs from 'the elements of reality'; and the predicate itself already assures us that all conclusions and work done upon it are merely fantasy.

The so common eagerness for 'competition' and 'answers' that when their current ground shakes they jump to the safety of the next the thing they can still call an 'immutable law', aided by the magical entities of 'elements' which are beyond all logic and description; truly the work of schoolboys and not the rigorousness expected of men - how much less of those how say themselves to be scientific one.

As there was never a reason to call water an 'element', except for our incapacity to peer further and our preconceived notions of creative design, so there never was to call its fission into hydrogen and oxygen as elements; nor for the interior parts of it as - nor again to so mindlessly today repeat the same worthless assertion about the interior parts of that 'atomic' nucleus, the quarks.

How was it 'surprising', or so are titled many of the articles, to find the sea of quarks as our tools become more powerful? How surprising is it that some baseless belief on intelligently designed species proved to exist only on their imagination?

Rather than a simplest possible particle or an individual act of creation their many 'colour', and the 'flavours' of many others particles, reveal plainly the precise clockwork of some complex structure that runs in many loops and forms; one whose gigantic untenanted halls are simply still beyond our incipient capacity to sound its many 'metabolic' pathways that form each of them, the parts where they differ and together form the greater structure they compose - it shows they are all 'quarks', they are very alike, and yet some small part differentiates one from the other. Just a small part; they are not 'entirely unique' or 'elemental', but almost entirely built in the same way except for some details - they are composed almost entirely of the same things, but then some few structures make them different.

That is the evidence we see; the direct opposite to the creationist idea of some ‘indivisible unique particles’ – it is a curious phenomenon and one whose interactions between their different structures requires a great deal of description and nothing could be more antiscientific than simply saying ‘that is how god created it’ and it fulfils that complex purpose by pure magical design.

Indeed the perturbation theory used to approximate results is a great quintessential example to all of quantum mechanics; the crassest and most mindless approximations ever made. Not only do they claim universal ‘laws’ and ‘particles’; they even are wrong about the prediction of such ‘laws’ every time – the very ‘quantified randomness’ of their dice-playing state-machine ‘model’ is not right even in their quantification endlessly find ‘things that should not be there’ and that the world is not their simplistic quantified species, but the ‘distinct atomic packets’ are merely structures we have not yet resolution to differentiate.

Every experiment proves how wrong their magical quantified particles idea is by showing how much more complex and unknown smaller factors are there, but somehow they ignore it and plunge on with unshakable faith on their doctrines that they hold the ultimate indivisible building blocks of everything; and so they go making up ‘virtual particles’ that are ‘ok’ to exist since ‘they last very little time’ – they say ‘it is harder to predict small-energy systems’ and blast it with energy since it is ‘easier to predict high-energy systems’, and even then it still differs wildly at every experiment so that they are happy if their divine irreducible law engraved on the background of the universe is merely an approximation of the average of it all.

They literally by brute force overcome all the ‘uncertainty’ of the underlying structure and take a single most powerful term of their idealized perfect Platonic form to dominate the equation, like the perturbation, and call all the smaller phenomena ‘statistical fluke’ to be truncated and discarded in favour of simply their idealized initial term; that observed undeniable so crass error and discordance of their ideas is not the very reality before their eyes – it is just a fluke from the universal dice and it has to be gotten rid of for the sake of their idealized divine design!

If they did discover something where that would seem like too much of a stretch they would very likely invent their own dark matter or new forces to keep on with their mindless deus-ex-machina of phenomena.

Or even when not using this particular mathematical technic they say ‘let us just sum up all these diagrams of probabilities and ignore all those less likely ones, everything is random anyway and one or other scenario happen for no cause; so if the average is close enough to our prediction, does not even need to be exact, then we can declare that as some inviolable law that god wrote on the source code of the universe’. It is beyond me to be able to describe such level of insane faith to their old indoctrinations and such wilful blindness in insisting on something that not only ignores the very phenomena they measured, but do so for the consolation of having the

emotional support of answers in the safety of knowing ‘fundamental laws’ even if they are some meaningless result just with ‘enough decimal cases’ of the average ignoring all that is happening. Once upon a time we simply lacked the capacity of observation to see that the ‘classical laws’ were not truly exact, but today it is the sick way of thinking of this religious cult that overtook Physics that is the great plague to our further understanding of this world.

More basically; that is just not ‘how science works’.

If you do an experiment a thousand times and get it exactly right nine hundred ninety of them you still have to explain why that one was anomalous; what affected it, what inferred, what made it diverge from the supposed ‘rule’ of the ‘law’¹²⁶. You cannot just say from your own imagination that ‘water’ or ‘fire’ is some indivisible element and that god made it like that to be unknowable to us so that you just draw the statistical report of your experiments with no explanation. That is no science; that is no description of reality – that is no knowledge about the mechanism through which those phenomena occur and differ. Likewise throughout the entire work I have argued how there is absolutely zero justification to claim all of these new things are indivisible magical species with all those properties as intrinsic parts of them; or for any such intelligently designed ‘law’ to accompany the transmutation of the elements – how much farther from science when all of that gets downgraded to ignoring the result of experiments to draw some ‘statistical table of possibilities’ with zero description of reality or the mechanisms involved, while as some insane cult declaring that to be the absolute truth because they believe they found the most fundamental elements and it is unknowable to peer any further so that we just have to accepted the mysterious ways god made all those species.

There is no resemblance of science in the Quantum doctrines.

The supreme highs of illogical absurdity on their wilful blindness of self-realized beliefs can only be rivalled by Daoism itself; ‘those whose eyes see nothing and whose ears nothing hear; whose body know no toil, but keep still in silence, and whose mind know nothing, but stay in empty darkness – those who fear knowledge and close themselves to all that is external for with no

¹²⁶ There are some very famous funny lines left by Dirac; as that ‘the underlying physical laws are thus completely known’ for chemistry and most of physics, on the Royal Society in twenty nine, but that the equations are just impossible to solve – and over three decades later, on the Scientific American in sixty three, from that statement he said that ‘one should not be too discouraged if there is no complete agreement of the result one’s work and the experiment’.

Truly, straight from its founders, the soul of Quantum; where things can just be random and require no logic or explanation at all – no matter how wrong you are or how much reality disagrees with it, you can always say reality is the one wrong and uncertain being so fickle that all effects come from no cause and that ‘the results of your work’, the equations you made-up in delirium, are the real truth, not the silly ‘experiments’!

If it disagree that is just how reality is; and it being like it is impossible to actually do any exact science of cause that made that effect – so let’s ignore it and be happy with our little perfect flawless work that can predict the general area of where things will be most of the time.

desires, resting inert and insensible, they let all things pass by following their undisturbed course'¹²⁷
 - for so too Quantum preaches that foolish are those who distract themselves with the

¹²⁷ “黃帝立為天子十九年，令行天下，聞廣成子在於空同之上，故往見之，曰：「我聞吾子達於至道，敢問至道之精。吾欲取天地之精，以佐五穀，以養民人；吾又欲官陰陽，以遂群生。為之奈何？」廣成子曰：「而所欲問者，物之質也；而所欲官者，物之殘也。自而治天下，雲氣不待族而雨，草木不待黃而落，日月之光益以荒矣。而佞人之心翦翦者，又奚足以語至道！」黃帝退，捐天下，築特室，席白茅，閒居三月，復往邀之。廣成子南首而臥，黃帝順下風膝行而進，再拜稽首而問曰：「聞吾子達於至道，敢問治身奈何而可以長久？」廣成子蹶然而起，曰：「善哉問乎！來！吾語女至道。至道之精，窈窈冥冥；至道之極，昏昏默默。無視無聽，抱神以靜，形將自正。必靜必清，無勞女形，無搖女精，乃可以長生。目無所見，耳無所聞，心無所知，女神將守形，形乃長生。慎女內，閉女外，多知為敗。我為女遂於大明之上矣，至彼至陽之原也；為女入於窈冥之門矣，至彼至陰之原也。天地有官，陰陽有藏，慎守女身，物將自壯。我守其一，以處其和，故我修身千二百歲矣，吾形未嘗衰。」黃帝再拜稽首曰：「廣成子之謂天矣！」廣成子曰：「來！吾語女。彼其物無窮，而人皆以為有終；彼其物無測，而人皆以為有極。得道者，上為皇而下為王；失道者，上見光而下為土。今夫百昌，皆生於土而反於土，故余將去女，入無窮之門，以遊無極之野。吾與日月參光，吾與天地為常。當我，縉乎！遠我，昏乎！人其盡死，而我獨存乎！」”

- 莊子：在宥, Zhuangzi: Zai You, where the main disciple of Er so well revels the cosmic horror of their aimed paradise of 'sweet ignorance' by degenerating into insapience.

“道常無為而無不為。侯王若能守之，萬物將自化。化而欲作，吾將鎮之以無名之樸。無名之樸，夫亦將無欲。不欲以靜，天下將自定。

...

為學日益，為道日損。損之又損，以至於無為。無為而無不為。取天下常以無事，及其有事，不足以取天下。”

- 道德經, Dao De Jing, XXXVII, XLVIII, where more classically it says that opposing the 'natural way' of the Dao will only cause suffering; that those who try to learn about nature are the cause of all evil and wise are those who are inert simply allow the natural course of things to move on.

Quantum goes a little further and say no matter how much they try they can never learn and interfere with the sacred Dao of the particles since it is absolute as decreed by some deity to be forever beyond our understand how any of those myriad of phenomena are determined; the factual reality we observe is just a 'decoherence' - a illusion made of averages from their ideal fantasy world where all is blind, deaf and mute having no characteristics and them all at the same time.

Daoism fits much more perfectly with the laissez-faire mentality; that human knowledge is unable to properly govern and mold the environment to select for that which is most beneficial to society, but that we have to trust the 'invisible hand' - which I go on at length in the comparisson on Kaiho on how such un-directed savagery of natural selection is detrimental to society in actually selecting for any desired benefit or improvement.

Yet the negation of reality for the sake of some imagined unjustified 'natural behaviour' of thing is still quite analogous to the Quantum doctrines, albeit convergently evolved and not like the 'species' and creationism of 'laws' which it directly inherited from its predecessors.

I mentioned on the Preface about the reader benefitting on the history of economy too, but used it very little; that is because it would be rather extraneous as it is a merely analogous case in how the many guesswork was conquered by scientific exact ways of Political Economy - knowing those will well serve the reader with many instances of that conflict between the extraneous wishful fantasy of many and the factual reality that plans on succeed have to be made in the accurate description of how things work.

meaningless attempts to learn and wise are those who simply accept the unknowability and uncertainty of the inviolable Dao that guides the particles on their natural course.

Quantum Mechanics was truly hard to understand because it is virtually impossible to comprehend what those people could possibly be thinking to be able to be so wrong; truly the commination of all human sciences they managed to prove that the sky was not the limited as they plunged through the stars – farther and deeper and more complex than all human disciplines thus far, but simply that was done at the wrong direction and is the most wasteful endeavour we have ever produced.

The mere fact that those ‘elementary particles’ can have different speeds conflicts with the very idea of ‘elementary’; since ‘change’ and many different forms are the characteristics of the complex and not the ‘simplest’ indivisible – to the very contrary since they can not only change to many forms, but directly be added to and subtracted from it is proved on the strongest form that they are indeed divisible on all such parts and far from some homogenous unique magical essence, if the fact that they are literally formed by collisions and undone to form another particles was not already undeniable proof of their shared building blocks.

The only ‘wave property’ we see is that of yet another sea; the one on all the ‘empty space’ of the ‘atoms’ and which myriad of particles yet unknown do indeed create waves as they all collectively by individually reacting to the same environmental pressures – selecting new structures and creates the weather and environment that produces all the ‘uncertainty’, all the ‘weird unpredictable behaviour’ being directly analogous to the ‘randomness’ of Brownian-motion, that lower-energy systems have.¹²⁸

Charles himself was inspired by ‘the economy of nature’ in developing Natural Selection, rather than this reductive and philosophic pursuit I mostly focused on, and even though economics have been mostly stagnant since then, since the hand is only invisible if we are blind and all policy should be selecting for the desired society rather than these last centuries of stupidity between ‘laissez faire’ and all the democratic popular incompetence with all this social waste, it is still greatly beneficial to analyse the parallels of the development of that science too; and that is why I mentioned it there, and did quote the Leviathan and Malthus.

¹²⁸The ‘wave-nature’ of particles is both the foundation of Quantum as still its core principle, so let us take a proper look at that phenomenon.

Let us take an electron and throw it out of the atom; it behaves like a coherent structure, a ‘particle’, when exposed to magnets which sort them into two groups by the spin direction – and it creates interference patterns when shoot at the general direction of two slits.

I am supposing it can maintain its shape all the while and is simply impelled by the sea of particles around which collectively create that fluid behaviour, perhaps carrying the electron on one of its peak; but is it plausible that the electron structure breaks down and joins the sea of particles as a wave of its constituent parts until it finds a nucleation site, it is ‘observed’ by a sufficiently forceful interaction, to condensate back to a coherent structure?

At the infamous double-slit it does not ‘interfere with itself’, but with the myriad of smaller parts that compose it and give it all its behaviour and characteristics; and the very outside environment. Does not a ‘classic particle’ form a ‘classical pattern’ instead of a perfect accuracy hitting always on the same spot? Are we not sure that such variation is not because of some inherent magic, but merely the uncounted for myriad of forces affecting its path beyond our knowledge? How could possible we, when observing another pattern, ignore all those uncounted for things as inexistent and say it can only be some alternative ‘non-classical’ reality that transcends all logic and sense? That rather than being negligent of accounting and ignorant we simply have to accept that it is just that the world collapse things into existence at random? Taking the insane assumption that those

Well... Yes, it is a perfectly plausible and logical description of a possible process. And truly there would be no ‘position and momentum’ since the damn thing does not even exist as a coherent structure just we cannot tell the position and motion of a molecule that is not even formed yet and not because of some quirk of some equation that decreases the precision of a value when approaching certainty on the other; of course far from randomness all those would be the result of the exact conditions at the nucleation site, and some other properties like those entangled would be a product of its creation and remain as a characteristic of the wave, but the general ‘quantum weirdness’ of ‘waving particles’ would survive on that scenario – and the analogous wave characteristics to position and moment would be exactly obtainable once we could observe the sea without disturbing it so greatly since the factors that give rise to that final result would always be there and although not formed into a known megastructure the wave is always ‘collapsed’ having exact parameters at every point between the ‘in and out’ states they consider in a diagram since it is interacting with everything else around the entire time as Measurement Is Unceasing.

Yet at our current knowledge we have no reason to take that more convoluted description of more complex processes to the simpler one that it travels the entire time as a coherent structure; all the ‘scattering’ that led to the probabilistic irrationality is readily understood by recognizing our ignorance of the shape of those structured and the details of the conditions at collision event – the consideration of the ‘non-interacting state’ jumping straight to the outcome while ignoring the mechanical process entirely is no different from throwing some object blindly at some other thing and writing down the table of the frequency of all the outcomes where the thrown object ended in, rather than the actual science of physics that deals exactly with breaking down the causes of that trajectory and justifying all possible outcomes as the exact product of some slightly different point of collision between the objects.

Further all this ‘sea’ talk and mockery of ‘non-empty vacuum’ can seen like I am saying that nature abhors a vacuum or that things needs a medium to travel through, but far from that; what I say is that a true vacuum will not ‘quantum fluctuate’, which is the sea of particles forming unstable structures, nor have any ‘force’ in it, since those are directional flows on the sea and other such structural behavioural patterns of a great deal of particles, so that our surrounding ‘vacuum of outer-space’ in the heliosphere is very very far from being empty – it is merely more rarefied than the atmosphere of earth, but full of solar wind with its atomic and photonic megastructure, the fluctuating sea of unseen smaller particles and the storm of many gravitational waves radiating from every body.

Even further we can speculate the effects of its internal structure; there are cycles and loops that keep that stable structure from untangling out and which then by necessity change its shape periodically – what would make it wobble up and down like a wave or helix, but we are virtually completely ignorant about such structure that is responsible for the degrees of motion and even more about the size scale of said loops, and please do not say ‘knots’, of energy-units that form stable structures to be able to rely on that as an important factor on the wave-behaviour observed.

are ‘inherent’ intelligently designed characteristics of that indivisible species is the only way to produce the even stupider assumptions of quantum absurdities; if the result changes by ‘observation’ it is clear that the crass observation is exerting a selective pressure, the stronger that interference with it the more it will push the final result, which summed with its other environmental factors thus produce other forms just like any other interference will push the final result to another shape.

Just like ‘classical physics’ is very useful and still used even when so many exceptions are known, so too are all our modern ‘laws’; they are tool of approximation, but as there never will be a perfect and ‘complete’ ‘law’ to describe the shells of electrons so too about any of their interactions – because, just like the shells, there is no guiding intelligent design, but the mere compound behaviour of all that environment selecting the most stable¹²⁹ form that they will shape.

Or is it not the Mendeleevian periodic table of elements one of the most beautiful, and useful, works of art we have? But far from indicating independent acts of creation for individual species, or ‘laws’ for their interactions, their characteristics and classification point at some more fundamental structure which produces that higher complexity of behaviours they display; the things that give gold its ‘distinct’ set of characteristics as ‘yellowness’ and ‘malleability’ and noble ‘irreactance’ to being dissolved, but which some present in other objects elicit their common cause – and the things we are yet to discover that produce ‘polarity’ and ‘spin’ and ‘mass’ in so many particles, but not in others.

Even beyond their ‘indivisible particles’ nowadays even large molecules show the same result, but they can only suppose that the entire things ceases to exist ‘as we know it’ to become the ‘random wave’ before coming back to existence only when ‘they can measure it’; and every time we cannot trace its exact path then ‘it cannot possible be that we just do not know how to calculate it at every moment, it must be incalculable’ – indeed how can they still insist and ‘get a kick out of how the elementary particles behave differently from everything big’, as so madly Feynman declares, when complex molecules and forth will behave the same if the same conditions, in proportion, are presented to select for that same behaviour?¹³⁰

¹²⁹ ‘Stable’, I repeat, not being some ‘state that the electron wants to be in’ or some other mystical universal ‘entropy’ guide, but merely the result of selection; that which is unstable is less fit and goes extinct and decays – all its component parts thrown into the environment which will shape new things endlessly forming ever more complex forms of stable structures, and thus those we observe.

¹³⁰ The ‘wave-function collapse’ by ‘observing’ with some obstruction in the way is quite as if we were describing smoke as that same wave-function; such a ‘random motion’, with many so much more ‘unlikely’ shapes for it to take, but still having that Aristotelian ‘natural tendency’ for a ‘more likely motion’ – and then if we sit closer to the bonfire ‘the wave-function collapses’ as it all now definitely goes to our face. How ‘likely’ is

The sea of particles whose existence they ignore is subject to Darwin drift as the giant megastructures cleave by the non-empty vacuum we use; and no experiment is independent of

that state of it all suddenly 'deciding' to go to one direction? As likely as of it gathering all in one place or of diffusing out down the gradient; that is, a hundred per cent of the time as it has no 'choice', but will result exactly as determined by the initial condition in perfect sequence shoving to and fro so that it will merely go where it is more strongly pushed to into the path of less resistance. Every 'final state' or 'result' is the product of the many sequential causes preceding it.

The 'random smoke' with hard-coded statistical behaviours is how Quantum Mechanics tries to describe the world; the rocks below do not seem to be random because 'their wavelength is much bigger than that of the tiny smoke particles' so that we stop observing the 'weirdness' when we leave that scope the theory was hand-tailored to explain – but of course at moment we consider the atmosphere, so much more easily moving tiny things on its wind, we see there is no 'natural tendency' nor any 'likelihood', but that it goes exactly where it is made less difficult by the surrounding conditions. All its 'strange behaviours' are glimpses of the subatomic wind pushing it to and fro; like the 'randomness' of Brownian motion of colliding smaller particles that make themselves known by their multitude – small parts which when selected into greater stable structures show themselves to us, and when unstable collapse back to its composing parts on the subatomic sea of our most often non-empty 'vacuum' which so fluctuates in and out of our measurements. The 'wave-function', or should I say the wave squared, of the smoke would give us some average of the climate; and the Random-Smoke believers would treat as heresy every atmosphere phenomenon – calling every sudden gust a 'statistical flukes' that happen by the divinity of Randomness acting from within the smoke and not for any cause, since such heretical thoughts of applying our mundane logic to the divine are unacceptable to them and smoke has to be the manifestation of the ever-existing self-created 'elemental', for absolutely no reason to claim such thing except that it is what they have always been taught to worship. And that approximation of the average is the undeniable proof of their religion and the divine random will who showed them how he, mostly, guides the smoke; only through his love for us the wave was designed like that so that the universe can work and we can exist, 'without the electron falling into the nucleus' as so religiously many Quantum teachers solemnly preach – and thus the fact that their wave or matrix equation is unable to predict anything with certainty, and only one characteristic at once, then it has to mean that reality is like that, and so since their religion cannot possibly be wrong then it is reality that has to bend to accommodate their equation and fit their ideas rather than otherwise.

Just as Aristotle disfigured the sciences with his divine principles; which, from their vagueness, could explain everything easily, since it would not explain anything with any precision.

How awful is that self-realized doctrine of ignorance of the 'Random-Smoke Cult'? So too Quantum Mechanics and its mindless assumption of 'true randomness', beyond all logic of cause and effect, are a plague to our sciences; and the most worthless endeavour we have ever invested in.

After the Smoke Cult is proved wrong by direct evidence of the atmosphere and perfect prediction of the movement of its particles, nothing will stop them to saying the next smallest thing we can see is random; and so, as shown, has been happening with science throughout history and continued by Quantum – but as also shown, the 'brute force' of the proof is not necessary to reject such baseless doctrines of faith.

Our medicine and mastery of biology just as our electronic technologies and engineering have flown to unbelievable heights on this last century, but Physics has died; it is stagnant and with the mind-set of having discovered the mystical unknowable units of some intelligently designed particles it will never improve further save for the occasional chance discovery of 'a new particle' – to which magical properties are added to 'describe' its average behaviour while all others are ignored as 'virtual', and so we will be forever stuck repeating that mantra of self-realized wilful ignorance until we cast away the insidious mental degeneration that is our modern Quantum doctrines of 'individually created species'.

those previous perturbation which moulded that entire environment – and which exactly define every single outcome with no space, or necessity, to mystical ‘probability’ and ‘likelihood’.

When Galton so realized in fluids he should have by analogy postulated such sea as the source of the *Zitterbewegung* he averaged over, but he never had the chance to learn directly from his grandfather the ways of science and logical deduction; to suppose the sea and trace the common descent of all such particles to those ‘virtual fluctuations’ – where the most stable would not collapse back as food, but exist on actively moulding the environment and being selected by it.

And as he failed, so here now I do it in his place.¹³¹

This was all the repetition of the photon example earlier; and before it descends into rageful rants let us leave here – in this first editing of it I have forgone the discretion and constraints of the first edition, and I have rather thoroughly and explicitly shown my disapproval and discontent through this most brutal and vehement gutting of the deified Quantum Mechanics as nothing more than the religious pseudo-scientific farce it is.

As said before the simple method can be applied to all others ‘elements’, or ‘laws’ and other unjustifiable illogical doctrines and so on, with very little difficulty; in how a mechanical description and hints of some underlying structure are the only logical assumption we can make, and the worthlessness of magical divine designs that simply are made by the universe as a pre-set species to perform that function.

Rather than the pointless tautology of repeating that even further here I will end this treaty; hoping it has been clear enough to at least crack those holy doctrines and make you question if

¹³¹ Indeed the poor foolish boy admired the wrong man; and so instead of continuing the legacy he produced such a pitiful book, dedicating it to ‘The acknowledged leader among those who have shown how the secrets of natural philosophy may be understood’ too blind to see that was nothing more than a mad cultist bent on spreading his meaningless metaphysical doctrines – as he so successfully implanted on so many.

“We have considered one case where we laid a trap for the electron, trying to make it tell us whether it was wave or particle, and we have seen how it avoided the trap. We must convince ourselves that no experiment can be invented which should at the same time require the electron to behave like a particle and like a wave.” – The New Conceptions of Matter IV, he says so religiously where baseless faith is his only argument and by Faith he ‘has to convince himself’ that the doctrines of his masters are the ‘true reality’; such doctrine of Uncertainty should have died with those flawed matrices that invented it, and taken to oblivion with it the metaphysical pseudoscientific school whence it came, school whose only argument is their religious conviction in the physical inexistence of particles. So very contrary to the scientific mind of his grandfather; who promptly says, as quoted on the preface of this book, ‘but ignorance more frequently begets confidence than does knowledge: it is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science’.

there is, indeed, absolutely no reason to defend the invariability of species postulating that any of what we now observe is an indivisible ‘fundamental particle’ – and that the baseless faith upon which such Quantum Mechanics are founded are a Dark Age to all Natural Philosophy as it for over a century has so brutally hindered the progress of our understanding of the world.¹³²

¹³² The Albert opposition to Quantum was seen as ‘entirely philosophical’ and ‘meaningless’ to the course and progress of Physics, but I affirm, and have shown, quite the opposite; to properly define things on the most precise and exact terms with no ambiguity is the point of science – and the only thing that will allow us to progress further. Saying ‘god created it’ or ‘it is random’ is a fruitless dead end, but to those critics of its utility, or rather harm to further development, refer back to the entirety of the second section and the artful insults on the first chapter of this third section.

That is the crucial and inseparable value of Philosophy, and all of sciences as aforementioned is based on Philosophy as some valid method defined to interpret the observed data, although the actual contemplations of Albert and the popular philosophers he commented on are entirely unworthy of any attention as they resolve around the worthless fantasies of a metaphysical world of ‘soul’ that cannot know ‘reality’ since it merely ‘probes this physical world through its own sense of perception’ which I have mentioned and dispelled on the second section as purely insane fiction long solved by The Descent of Man as all thought and ‘perception’ or ‘senses’ being the computation of exact chemical processes of physical perturbations upon our organic mammalian brain machinery, responding to the caused stimulus with some equivalent effect exactly as the brains of any other animal and as every other physical phenomena in this single world and reality.

“Never mind the philosophy, never mind anything of this kind; just guess the equations.

The problem is only to compute the answers so that they agree with experiment and it’s not necessary to have a philosophy, or words about the equation.”

That’s true in a sense, yes; and no! It’s good in the sense you may be if you only guess the equation you’re not prejudiced in yourself and you’ll guess better.

On the other hand maybe the philosophy helps you to guess.

It’s very hard to say.

For those people who insists, however, that the only thing that’s important is that the theory agrees with experiment, I would like to make an imaginary discussion between a Mayan astronomer and his student.

The Mayans were able to calculate with quite precision, great precision, the predictions, for example, for eclipses and the position of the Moon in the sky and the position of Venus and so on. However it was all done by arithmetic; you count a certain number, you subtract some numbers and so on. There was no discussion of what the Moon was; there wasn’t even a discussion of the idea that it went around – there was only calculate the time when there would be an eclipse or the time when it would rise the full Moon and when it would rise the half Moon and so on. Just calculated only.

Suppose that a young man went to the astronomer and said: “I have an idea, maybe those things are going around and they are balls of rocks out, like rocks, out there; we could calculate how they move in a completely different way and just calculate what time they appear in the sky and so on.”

Of course the Mayan astronomer would say: “Yes, how accurate can you predict eclipses?”

You say: “I haven’t developed the thing very far, this is...”

“But we can calculate eclipses more accurately than you can with your model so you must not pay any attention as far as the mathematical scheme is better.”

And there’s very strong tendency of people to say against some idea, if someone comes up with an idea; say let’s suppose the world is this way, and you say to him ‘Well, how would you get, what would you get for the

answer for such and such a problem' and he says 'I haven't developed it far enough.' And you say 'Well, we have already developed much further, we can get the answers very accurately.'.

So it is a problem as to whether or not to worry about philosophies behind ideas."

- A scene from a lecture from Feynman little, which is so contradictory when he developed that very diagram that simply ignores all reality of what is happening to instead list a bunch of possible states; which, just like that Mayan astronomer method, has no future ahead of it and instead is hindering the progress of the actual scientific method that will exactly describe the reality that ends up producing those outcomes. He starts that lecture saying that if two different theories produce the same result with both agreeing with experiment we have no means 'in science' to pick one, but as shown as the very objective of this treaty that is very far from true and only a very defective scientific method, on some flawed philosophical foundation, can be thus without some criteria for what constitutes a valid, or better, assertion, as our parsimony, or that 'can only disprove, but not prove' when science is an exact clockwork that is shown to be complete and is proven perfectly right once we do describe a system completely.

Richard Phillips Feynman, thirty five years ago. Besides many contribution to the development of Quantum and its Particles, he is most famous for his Diagrams; which is used to draw two dots moving at each other or one dot breaking apart in one or more parts - in which if one gained some energy, as a photon colliding with an electron, the other lost, and thus ignoring all of what is happening we look up a table of probabilities of what we expect to happen if two things collide, or if something breaks apart, or any such 'interaction' that we thus intentionally ignore as unknowable magic and without doing any actual science at all we can zoom in using the experimental data for what we expect to happen. For that he was ranked among the ten greatest scientists of all time, as voted by famous modern scientists, in a list where Albert was ranked first.

Rather I endeavoured to show that if two different theories can explain the same phenomena then it is not that 'both are valid', but that what so ever they have in common is the true theory we are forced to admit by necessity and where they disagree is to be pruned off as unnecessary extraneous addition; my Logical Succession uses the classic scientific method entirely, but improves it further by providing that surer foundation to what is a valid theory using only the justifiable and necessary parts of it - where some magical 'law' intelligently designed to perform the phenomena is never a proper 'theory' to explain how any thing works.

"Nous exposerons l'origine, nous tracerons l'histoire des erreurs générales, qui ont plus ou moins retardé ou suspendu la marche de la raison, qui souvent même, autant que les événements politiques, ont fait rétrograder l'homme vers l'ignorance.

Les opérations de l'entendement qui nous conduisent à l'erreur ou qui nous y retiennent, depuis le paralogisme subtil, qui peut surprendre l'homme le plus éclairé, jusqu'aux rêves de la démence, n'appartiennent pas moins que la méthode de raisonner juste ou celle de découvrir la vérité, à la théorie du développement de nos facultés individuelles : et, par la même raison, la manière dont les erreurs générales s'introduisent parmi les peuples, s'y propagent, s'y transmettent, s'y perpétuent, fait partie du tableau historique des progrès de l'esprit humain."

- Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain: Introduction, Sketch of a Historical Picture of the Progresses of the Human Mind: Introduction, whence you can further find on how the general errors have retarded and suspended the advance of reason and led to the retrograde path towards ignorance; in how those operations that lead or retain us in the error, ignoring a rigorous and clear framework and plan to instead accept any subtle paralogism, keep us away from all progress and truth.

"This indisposition to innovation, even in science, may possibly have its use, by tending to check crude and premature theories; but it is obvious that, if carried too far, it strikes at the root of all improvement. It is

Arriving at this final point the reader might think I am exaggerating and making a caricature of Quantum Mechanics; as so commonly the spread of misconception and lies is a the greatest tool used by religion creating prejudice against something before that individual ever has a chance to learn the truth – and that such holy apex of our modern science could not possibly be anything like the acephalous joke I am describing here.

Yet I assure you that deception and misconceptions are far from the case; and like on every statement made here I invite the reader to not accept my word, but go on and read it for himself.¹³³

impossible to observe the great events of the last twenty-five years in their relation to subjects belonging to political economy, and sit down satisfied with what has been already done in the science. But if the science be manifestly incomplete, and yet of the highest importance, it would surely be most unwise to restrain inquiry, conducted upon just principles, even where the immediate practical utility of it was not visible. In mathematics, chemistry, and every branch of natural philosophy, how many are the inquiries necessary to their improvement and completion, which, taken separately, do not appear to lead to any specifically advantageous purpose! How many useful inventions, and how much valuable and improving knowledge would have been lost, if a rational curiosity and a mere love of information had not generally been allowed to be a sufficient motive for the search after truth!"

– Principles of Political Science from Malthus, which rather the advantages of proper science are today ubiquitously known as the very foundation of our future; and which we can extend to even the most immediate practical use, as on what it infers about our lost drifting arts of Political Economy.

"Whether moral and social phenomena are really exceptions to the general certainty and uniformity of the course of nature; and how far the methods by which so many of the laws of the physical world have been numbered among truths irrevocably acquired and universally assented to, can be made instrumental to the formation of a similar body of received doctrine in moral and political science."

– A System of Logic, Ratiocinative and Inductive, an admirable, lofty goal and a monumental task of unifying all human arts which is finally possible with Logical Succession as we abandon this pseudo-science of magical 'laws' for a proper Natural Philosophy; and one which I accomplish on my work of On the Fate of Species.

¹³³ If you have no idea where to start then one of the great names in QFT is that of Weinberg; and above that his seamless presentation and clarity of exposition are simply wonderful – with a little bit of the history to guide the reader in to our current field theory.

But I do highly recommend some basic knowledge in mathematics, of multivariable calculus and linear algebra for matrices, to at least have an idea where those equations are coming from and what they are trying to accomplish with them and then familiarity with the history of what today is called 'classical electrodynamics'; knowing that will allow the reader to then see how Albert did not even have to slap that Lorentz transformation on the equation of motion because it had already been done – and how for no reason he got all the credit from the work of the ether theorists leading everyone mad to try to update every equation and observation to have 'Lorentz invariance', and other 'symmetries', as the compression of things under pressure became accepted. That equation was made when dealing with a magnetic field; and so as a foreshadow to our current field derangements the age of wave-particle duality began when it became acceptable to just skip the reality of what is happening to treat merely of the initial non-interacting state and jump straight to the probabilities of the final after-interaction state, 'in' and 'out' on his words, rather than having to explain how any of them came to be.

The first time you study Quantum Field Theory you might despair in terror when faced with those gigantic functions full of letters from many alphabets, but after a little familiarity true contempt will be born; or rather nothing short of absolute disdain.

It is thoroughly laughable how horridly clumsy they are and nothing could be less elegant than its history; that of dozens of men ‘fixing’ old erroneous ‘laws of the universe’ by flooding it with ever more operators – until they feel like they have fine-tuned that deficient base assumption close enough to the average of observation to call it, and its operators, the source code and building block of the universe. Whenever a ‘new fundamental block’ is found, rinse and repeat; deforming the original already-wrong equation ever further.

When contrasted here to the simplest of logical explanations it can seem incomprehensible how anyone would seriously believe such fanciful tales, but we have the detailed history of the development of such foolish beliefs so that we can see exactly how it got to such a point beyond any salvation or profit; it was not created in one day, but the result of incremental changes built upon old defective beliefs¹³⁴ – and likewise today we know that its modern acceptance is like that

A man meets a woman is the ‘in’ state when they start interacting and then they consider the ‘out’ state of ‘the likelihood that they produced a baby’ and how probable are each of the babies characteristics; rather than considering what the interaction consisted of, if they engaged in sexual activity, if his testes produced viable haploid gametes, the chemical gradients responsible for the reshuffling and selection of that DNA on the gamete, which of those fertilized the egg, how the zygote divided and differentiated and so on to explain the production of the baby and all its characteristics – real science, that provides the power of knowledge and understanding, deals exactly with explaining every step along the way, and not an ‘in and out’ diagram where ‘magic happens’ and the result is suddenly produced as a table of dumb random statistics of possible outcomes.

That is about it; the reader should promptly notice that even such great author simply lists the ‘competing equations’ of the different parties; that which seems to be more correct is taken as universal truth wholesale with all extraneous and unnecessary imaginative occultism begotten with it rather than having the critical judgement to separate what is truly absolute necessity to be concluded from that find and what is the fantastical baggage from the author – and so the work completely lacks in all art of argument, logic or philosophical consideration of what is a valid scientific assertion. It merely compares ever wilder and imprecise unsolvable wave functions competing for that which, when ignoring all outliers and averaging everything, can get the closest at using simplifications to guess at ‘the most common random result’.

To which beyond awful pseudo-science the method here developed can be repeated infinitely many times at how unjustifiable their magical theories are; they simply do not follow from the premise and observations, but are unnecessary embellishment of religious cultism mixed with the actual find and real phenomenon in question – and all such extraneous mysticism is beyond any rational acceptance, even if the equations that accompany it were not so grossly inaccurate and by design forever unable to even assert any outcome.

¹³⁴ The grand triumph over Reason that Her enemies had at Copenhagen a century ago makes it quite clear in their fondness for spooky actions their irrational motivations; just like today amid the most venerated physicists are those that hold the same baseless belief that if only they can maintain that veil of mystical uncertainty, if only the world has no mechanical rigidity and absolute logic, then they can maintain their make-believe fantasies alive – just as Kant if only they can banish knowledge then there is space for faith, and even pure mindless ‘quantum randomness’ is enough for them to embrace it as the source of their prized

of any other religion for so the new generation is trained by obligation on the educational institution and live within the bubble where they only reassure each-others beliefs.¹³⁵

And so the exact equations and each detail of such absolutely meaningless fantasies of engineering approximation that they so painstakingly built are beyond discussion here; as the introduction of our origin by Selection could only present the truth upon the observed reality and not treat of every fable built on the last millennia, so too I focus entirely on the actual phenomena and not on the particular drunk delusions produced by their fantastical equations – imaginary problems which do not even exist, and which ‘super’ self-contradictions has by itself wasted their almost entire labour throughout the last century making up ever more rules to deal with the incoherent discordance of the impossible results of their fantasies instead of actually investigating reality further.

The ‘spinning electron’ problem is one of such; the ultraviolet catastrophe and many other such infinities of their silly approximations are the same – and the greatest problem is in their usual solution, as when it was proposed ‘the minimum distance L’ or the doctrines of ‘selection’, under several names and often upgraded to ‘super’ when they find even more errors that need to be hand-picked out by inventing new laws, where some hardcoded mystical power simply forbids some of the results of that ‘absolute law of the universe’ so they can just ignore everything outside that arbitrary bound made just to justify their equations rather than to explain reality.

The equations give results that are pure nonsense and that do not exist in reality because the equation itself is pure nonsensical and a mere approximation of some detailed cases; the equation is wrong, and not reality that has to be changed and have that mystical force that forbids it from reaching those nonsense of the equation. However much to our detriment this very absurd modus operandi was pursued; those filthy lazy parameters that they shoved on their approximations have been extended as if reality had to obey the equations now so that today we have all this ridiculousness here described.

metaphysical ‘consciousness’ so that humans will be unique apart from all animal and physical universe holding their fictional special place in ‘the creation’.

But of course That is not dead Which can eternal lie; and after strange cons even Metaphysics, who held her empire over us since the most primitive mind, may yet die.

¹³⁵ “Amidst all this bustle ‘tis not reason, which carries the prize, but eloquence; and no man needs ever despair of gaining proselytes to the most extravagant hypothesis, who has art enough to represent it in any favourable colours. The victory is not gained by the men at arms, who manage the pike and the sword; but by the trumpeters, drummers, and musicians of the army.”

– A Treatise of Human Nature, says Hume criticizing his own time; and although I would not call it eloquence, the fantasies of mysticisms have always been a very popular way to gather proselytes.

We indeed do build some things to some nano-scale degree of accuracy with our modern 'Physics'; just as the old Greeks, Romans and the past centuries of our scientific revolution could build many things with their tools even if those were far from any accurate picture of exact reality – they are tools for engineering that can do many jobs with sufficient precision, and I myself often use Quantum Mechanics, already as an approximation since the holy wave doctrine that already would only give 'likelihood' and no answer to anything is further unsolvable and unusable so that we have to rely on DFT on the basis set hellish landscape just as we still use 'classic' and other tools that are awfully wrong to any material they were not hand-tailored to solve, when dealing with the analysis of the solid-state chemistry in the modelling of new materials as our current technology so hungry crave for better batteries and more resistant, light and versatile building blocks to our green atomic age and progressing space colonization.

Yet, as shown, the mysticism-ridden abstract mosaic glued-together-with-shit that is Quantum Mechanics has no future; rather than giants whose shoulders we could stand up the proponents of Quantum are a dead weight chaining down science, as the field is forever stuck in its own denial of reality since it so baselessly assumes to be working with the indivisible building blocks of the universe – and thinking such crass approximations to be a reflection of factual reality has already caused this Dark Age of the past century which so greatly harmed our future understanding of the world and our progress into it.

V - ὅπερ ἔδει Δείξαι¹³⁶

I close this treaty by reminding the reader of how much analogy and figure of speech I have used; that I have affirmed that a single homogenous ‘particle’ suffices to evolve into the behaviour of all phenomena known – provided that it is discreet and has a direction.¹³⁷

And so I have many times described them as these threedimensional voxel in space that entangle in giant structures; making the exact clockwork of everything we observe.

That is much better than our current models, but I highlight here I used of this very childish explanation in order to bring the reader into the mind-set of simpler rules that could select more complex structures; what these ‘three assertions that explain everything’ mean is much deeper than the voxels.

For example that would do the very awful thing of implicitly assuming that ‘space exists’ for those voxels to be in; as mentioned Quantum and the Standard Model do not assume only that myriad of ‘particles’ with their inherent characteristics and ‘forces’, they assume space and time themselves implicitly just as ‘numbers’, which discussion you can have fun reading Aristotle to see how if anything has some intrinsic property in relation to another that cannot be reduced to the same single measuring rod then it is necessary to assume that ‘numbers’ are some perfect Platonic form and intrinsic characteristic of things.

For example the comparison between ‘the force of gravity’ and other forces implicitly assumes that ‘numbers are real’; and on the background of the universe there is the ‘perfect form of numbers’ to which those forces would have to refer to in order to be that exact magnitude of some other.

My three ones do not assume numbers or any such magnitudes, but numbers and magnitudes themselves are the product of those particles; one particle by itself have no ‘intrinsic number’ and magnitude, but ‘number’ and ‘magnitude’ is merely a word to describe a collection of such particles.

¹³⁶ Between ‘conclusion’ and this I was forced to admit the infinite superiority of having this as the name of the final chapter; even more so when little could be farther from Q.E.D. than the successive mess of imaginative equations that is Quantum ElectroDynamics.

¹³⁷ We can ignore the empty entity of the ‘particle’ statement and reduce to two saying simply ‘there is some unit called motion and it is discreet’, or that ‘there is discreteness and it moves’, but it is not a meaningful reduction and much more confusing what is meant by that description.

Likewise 'space' and 'time' are not assumed; they are derived from those three postulates; again to a single particle 'space' does not exist, but only comes to be as a concept when considering the relation of two or more particles – the postulate that they have a 'direction' is used for the lack of a better definition of such 'intrinsic property', but it is the behaviour that their relation of 'space' to each other changes. How many changes take to reach some other relation between particles is the 'absolute time' or 'tick rate' of the universe.

By being 'discreet' and having that 'direction' they are forced to have some interaction, rather than 'merging into one', when they collide; and that is the requirement for them to form messy loops and shapes creating the environment where stable, and more complex, forms can arise.

These three axioms are the most complete, and simplest, description of the universe describing all the rest as complex phenomena formed by the complex structure of a multitude of them which interacting creates the entire micro and macrocosms.

If there was a single particle, or none, then 'space', 'numbers', 'time' or anything else would not exist; they, like all other phenomena, proceed from the rich initial condition of the myriad of particles our universe had – the discussion of which were those conditions are entirely up to experiments to determinate.

With a single or few particles, or if organized on some initial condition where they would never interact, then nothing would come of it, but we see some rich initial condition densely interacting with each other; forming loops or merely hindering each other when happening into the sequence that formed such structure, and then as that structure suffered perturbation from its surrounding sea of particles it would be unstable breaking that loop and joining back into the sea – or be stable resisting the perturbation. The big chunks of such stable structures would change the environment around it, and they themselves would interact with the environment and each other; increasing the complexity of our possible interactions, moulding that very selective pressure that made them – and giving as inheritance either its own structure to be built upon by iteration or simply that very selective pressure into new forms.

Our gap in knowledge is about such progressive complexity of selection until they come to form the megastructure that today most call 'elementary'; what great structure first had that which we call 'mass' and what processes of it lead to the radiation of 'gravity', what structure and processes causes the peculiar conditional behaviour of the interaction our 'three charges' and so on how all converge from that common descent – after which gap we return to our known world where we see the clear line of exponential complexity of selection forming atoms and molecules, be the first being selected into heavier forms by our cosmic furnaces of the stellar and galactic superstructure or the second with all delicacy of chemistry flourishing on the planetary outskirts whose conditions build all complexity of these infinitude of reactions, such as 'life'.

Both merely the product of nothing more than the sequential cause and effect of its surroundings.

The radiation of smaller structures from itself, be it the product of internal cycles that keep it stable or outside perturbations, when absorbed by another structure is what we call 'a force'; just as the effect of the general flow disturbed by the presence of the structure when perturbing another structure is also what we would call 'a force' – or any other such processes where the products of one structure 'interact' causing a structural change to another body, an 'acceleration' as quantified by each of such component particles and only possible on such complex megastructures, be it the addition of new parts, the removal or simply the restructuration after a perturbation.

As for the 'explanation' of why this initial condition rather than any other or about these three admittances and reason for that 'intrinsic property' then I can speculate no further with what I know at the moment, but far from saying 'this then is the intelligently designed law of god for this universe and there is nothing else to discover' I say the direct opposite – I used the very same hated term 'intrinsic property' exactly because it is no valid explanation, but left for posteriority to peer further than I could.

Far from saying 'science will never know it', I take the only justifiable option; which is the path that does not hinder progress, but encourages the intellect to investigate further for certain truth.

I did not make up these 'three laws' because it pleases me to do so, but because I was forced to do so; when seeing our modern theories I was faced with this mindless flood of unnecessary admissions fancifully made with no necessity and rather quite discordant to explaining the reality we observe – as for why those three, they are simply a reflection of my current inability to reduce it any further and no more than an example of a valid model but which only observation will show which of the infinity of valid models are the one we live in.

It might be less; it might be three very different ones to these here proposed – yet the method to get there is clear.

Thus let us no longer copy Aristotle in giving 'natural tendencies' to each 'element'; let us no longer imitate Dalton, and the entirety of our past revolution, in spending our lives seeking for some magic law from god that will 'explain everything' – let us truly seek Scientia and proceed carefully not being hasty to jump at unnecessary conclusions, and much less entirely unjustifiable ones.

Let us not suffer the helplessness of thinking some diseases more divine than others; let us not blind ourselves with mysticism by thinking some phenomenon more unique and singular than others – so that we may find the cure and exact description of how everything that has been

formed, that currently is and that shall be can be nothing else than the product of sequential steps in Logical Succession.